THE

LONDON PRACTICE

OF

PHYSICK:

Or the whole

Practical Part of Physick

Contained in the Works of

Dr. WILLIS.

Faithfully made English, and Printed together for the Publick Good.

LONDON,

Printed for *Thomas Basset*, at the *George* in *Fleet-street*, and *William Crooke*, at the *Green-Dragon* without *Temple-Bar*. 1685.

THE PREFACE.

THere are many Perſons to whom the Voluminous Theory of Dr. Willis, might prove tedious, who would be deſirous of having the Practical part of his Works entire by it ſelf; and all ſuch will find themſelves here gratified; and doubtleſs there are many Peruſers of his Theory, who will not be without his whole Works; and nevertheleſs will be equally deſirous to have this Practical part by it ſelf, as a Portative Manual to direct them in Practice on all occaſions. The parts of Dr. Willis's Works which contain

tain Practice in them are these,

1. *His First and Second Parts of his Pharmaceutice Rationalis.*

2. *His Tract of Convulsive Diseases.*

3. *His Tract of the Scurvy.*

4. *His Tract of the Diseases of the Brain and Genus Nervosum.*

5. *His Tract of Fevers.*

As for his Tracts, 1. *of Fermentation,*

2. *Of the Anatomy of the Brain,*

3. *Of the Accension of the Blood,*

4. *Of Muscular Motion,*

5. *Of the Soul of Brutes,* &c. *they are all Theory, and contain nothing of Practice in them. That which you have in this Volume, is, all the Practice of Physick contained in those first five Tracts; I say all the Practice of Physick there contained, because there is not a great deal of Theory even in those which is not here inserted: For instance,* Dr. Willis, *in the First Part of his Pharmaceutice, is very large in giving the*

Ana-

natomy of the Stomach or Ventricle, nd of the Guts, being the parts which e calls the first passages, and he gives any Figures for the Illustrating what e there says concerning them. In the econd Part of his Pharmaceutice, he large in like manner in giving the natomy of the Lungs, &c.

Now these things are here omitted as eing besides the design of this Work: gain, Dr. Willis, in many parts of is Practical Works, is very large in he Pathology of Diseases, and in the Ætiology of Symptoms; as to these also, have been wholly arbitrary in them, ften omitting what was conceiv'd too rolix, and setting down barely what as judg'd necessary for Illustrating he Nature of Diseases.

To obviate therefore all Cavillations, which any Man shall pretend to make against this Work, as imperfect; on the account that all that Dr. Willis has

has written in his Books of Practice,
not here contained, I shall give you
short what you may here expect.

First, You will here find all the D
finitions or Descriptions which Dr. Wil
gives of Diseases and Symptoms,
gether with as much of the Ætiolo
and Pathology as was conceiv'd necessa
or would be desir'd in a work of this Natu

Secondly, You have alway here
Method of Curing in any Disease, co
taining all his Physical Indications a
Intents of Curing, none being omitt
throughout his whole Works.

Thirdly, There is not a Recipe
order to the Cure of any Disease in a
of his Tracts, but it is here inserte
I have been induc'd to believe on
veral Grounds that the Practical pa
of Dr. Willis's *Works, set forth aft*
this manner, would be acceptable
many. For, in truth, besides the chea
ness and portableness of the Volum,

a

y Perſons unacquainted with the La-
e Tongue buy Dr. Willis, it cannot be
ought that they will have the pati-
ce to peruſe a deal of Theory, con-
ing of large Anatomical and Phyſiolo-
al Diſcourſes, and the like, which
ugh never ſo clearly delivered in Eng-
h, cannot be comprehended by them
der ſome years ſtudy: And again,
oſe who underſtand the Latine Tongue,
ll certainly be better pleas'd to read
e Theory at large in the Original,
an in the Engliſh, and having this
nual of Practice by them, they will
d Dr. Willis's Theory of Diſeaſes ſo
irly hinted in the Indications of them
re given; that if at any time they have
rgotten it, they will eaſily call it to
nd again, having once read it be-
re. The order obſerv'd here in placing
e Books of Practice of Dr. Willis in
is Volume, is not according as he writ
em one after the other, neither is it

con-

conceiv'd that if he were now to pub
his Works together himself, he wo
ſo place them. Wherefore tho' his Ph
maceutice was the laſt Book he wr
yet it is plac'd here in the firſt place, in
gard that the firſt part of it contains the
nerals of Phyſick; it treating of Vomit
Purging, Sweating, &c. Which Gener
ought to precede what he writes on pa
cular Diſeaſes. After the two parts of t
Pharmaceutice, we ſet his Tracts of Con
ſive Diſeaſes, and of the Scurvy, which
deſign'd as Prævious and Introductor
his Tract of the Diſeaſes of the Brain
Genus Nervoſum; which follows next;
in the laſt place we put his Tract of Fev
As for the Head Title prefixt to this Volu
where it's call'd the London Practice
Phyſick; *no man haply may wonder at*
if he conſiders, that whatever Medici
Dr. Willis, *with his great Diligence*
moſt accurate Judgment, both in Conſu
tions, Practice, and on other occaſions,
ſer

serv'd to be most in use here, and most rationally prescrib'd, he always carefully recorded them, and everywhere throughout his Books, here Printed, set down the most select forms of them, as he often declares himself: Some parts of his Works indeed were written at Oxford, *as his Tracts of Fevers, of the Scurvy, and of Convulsive Diseases; but in regard the chiefest parts were written here, I mean his two parts of his Pharmaceutice, whereof the first contains the Generals of Physick; and his Tract of the Diseases of the Brain and Genus Nervosum; I think the Title may bear for the reason before given. I well know that Dr.* Willis's *Works are set forth together in Folio in the English Tongue. But as this Book is of a different Nature, it containing only a Synopsis of his Practical part, the large Theory being omitted, so it has its peculiar use: As for the way of Translation us'd in this Work, any Man who pleases to compare a Leaf of what is here done with a Leaf of the former*

Tranſlation, will eaſily find that this is no Tranſcript; the way of expreſſion being very differing; and we often diſagreeing as to the ſence of Dr. Willis; *in which others will judge who has done him moſt right: and as I do not doubt but now and then there may be found a more apt expreſſion than what I have us'd, ſo I conceive there is no very material errour in what I have written; and without Animadverſion, or Inſiſting on particulars, I ſhall take freedom to ſay that I believe what I have here Tranſlated will be judg'd by all Men to be more eaſy, correct and clear, than what has been done before.*

Eugenius Φιλιατρος.

THE

THE *LONDON PRACTICE* OF PHYSICK,

Contained in the *First Part* of the

Pharmaceutice Rationalis of Dr. *WILLIS.*

CHAP. I.

Instructions concerning Vomiting, with Precepts of Vomits.

THat a Vomitory Medicine may be duly Administred; We ought to consider what are the Indications or Signs which foreshew the want of it, what things permit it, and which prohibit it.

It is a sign that a Vomit is needed, when a bilous and bitterish humour floats in the Ventricle, so that from thence a nauseousness, an ungrateful savour, or a Head-ach is caus'd: Also if the Stomach be burthen'd with a viscous Phlegm, as in the longing disease of Maids, and in Men after Surfeiting, and disorderly eating or drinking.

In most cases when with a difficulty of breathing, the loaded Ventricle is affected with a lothing of meat or nauseousness, upward Purging is a common Remedy.

Moreover, when the Stomach is beſet with ſome Exotick ferment, ſo that it preſently caſts up whatſoever is taken into it, even though the cauſe of it proceeds from ſome remote parts; Vomiting is often advis'd with good ſucceſs: for by this means, the Veſſels that contain the Gall being very much drain'd, the Choler is emptied from the Blood in a more plentiful manner, and its Feaveriſh diſtempers are taken away.

Again, foraſmuch as the Superfluities or Stagnations of the Nervous humour are moſt eaſily Cur'd by this means of Evacuation; the uſe of Emeticks contributes not a little toward a Cure in the Gout, Aſthma, Epilepſy, Madneſs, and very many other Diſeaſes which are accounted great, and moſt difficult to be conquered.

Secondly, As to thiugs that permit this Remedy, it may be given where there is a ſtrength of the *Viſcera*, and a firm conſtitution of Body, and eſpecially to thoſe whoſe Neck and Breaſt are but ſhort, ſo that there is a nearer paſſage from the Stomach to the Mouth: We are encourag'd alſo to give a Vomit to ſuch as Vomit eaſily, and bear it well, and when the matter to be expell'd is lax, and comes away readily; alſo when we find Nature in a calm, and as it were at leiſure for ſuch an undertaking.

Thirdly, The uſe of Emeticks ſeems to be prohibited, where there is a difficulty of Vomiting, or an unaptneſs to it found by former experience, where there is a tender and weakly Conſtitution, a tall and ſlender Stature, infirm Inwards, and eſpecially if there be a Conſumptive Diſpoſition, with an Ulcer of the Lungs, or Spitting Blood; alſo where there is a too great Cachexia, in which there is danger, leſt the humours ſhouid be forc'd from the whole Body all on a ſudden into the Ventricle: Moreover an unuſual effervеſcence of the Blood, the fits of Feavers, and an expectation of a Criſis, do wholly exclude this ſort of Medicine.

Preſcripts of Vomits.

TAke Oxymel of Squils an Ounce and a half, Wine of Squils two Ounces; mingle them and make a Vomitory.

Take from Six to Nine freſh Leaves of Aſarabacca; bruiſe them, and put them into three Ounces of Whitewine; ſqueeze them forth, and let it be taken cum Regimine.

Take Powder of the Roots of Aſarabacca, from a Dram to four Scruples; Oxymel of Squills an Ounce and a half; mingle them, and let it be taken in a draught of Poſſet-drink.

Take Salt of Vitriol, from a Scruple to two Scruples, or a Dram; let it be taken in a draught of Poſſet-drink.

Take

Take the Infusion of Crocus Metallorum, from half an Ounce to an Ounce, or an Ounce and a half; let it be taken in a draught of Posset-drink cum Regimine.

Take the Infusion of Crocus Metallorum six Drams, Wine of Squils an Ounce and a half, Syrup of Vinegar simple half an ounce, mingle them and make a Vomitory.

Take Sulphur of Antimony from six Grains to eight, Cream of Tartar a Scruple, mix them and let it be given in the Pap of an Apple, or in a Stew'd Prune, or in a Spoonful of Panada.

Take Mercurius Vitæ from three Grains to six, let it be taken after the same manner; after the like manner may be taken the Flowers of Antimony, Aurum Vitæ, or the Solar Præcipitate, and Turbith Mineral.

CHAP. II.

A Cure for over-working of Vomits; and Anti-Emetick Medicines, or such as stop Vomiting, with Instructions.

IF a Vomit over-works, let the Patient presently be put to Bed, and let him make use of both External and Internal Remedies; and first of all to appease the disorders in the Stomach, let there be outwardly administred to it, either a warm Fomentation of the decoction of *Sea-Wormwood*, *Mints* and *Spices* in *Red-Wine*, or let a slice of the Pith of *Bread* be Toasted, and dip'd in *Claret-Wine* warm'd and apply'd thereto: Let there be a Glister given of *Milk*, with *Treacle* dissolv'd in it. Let also warm frictions of the Members be us'd, and strong Ligatures above the Knees to keep Convulsions from those parts; let the Stomach in the mean time be kept empty, unless an inclination to faint, or swouning otherwise requires, but as soon as it is able to receive any thing of Food, or Medicine, give some *Cordial Water* or *warm Burnt-Wine*: In case the Affect be very violent, and the Pulse admit it, *Venice Treacle* or *Diascordium*, sometimes also a Solution of *Laudanum* or an *Opiatick Tincture* do well.

Præternatural Vomiting stirr'd up from other causes, is either *Critical* or *Symptomatical*: In the former nothing must be done too much in haste or unadvisedly; that excretion so there be a sufficiency of strength ought not to be stay'd, but the discharge

of the matter to be expell'd, is either to be facilitated or hasten'd, or it is to be converted some other way; hence when a person is urg'd by a nauseousness, or striving to Vomit, you may properly give either *plain Posset-drink*, or with the Leaves of *Carduus* boil'd in it; also sometimes *Oxymel* or *Wine* of *Squills*, or *Antimonial Wine*; sometimes it may be good to use *Glisters*, sometimes also a gentle *Purge* carries away the matter offending the Stomach, by a more easie way of Evacuation through the Intestines.

Symptomatick Vomiting proceeds from a conjunct cause, either subsisting in the Ventricle, which produces that *Idiopathick Affect*, or fix'd in other parts, which stirs up their Convulsions, and consequently Vomitive Convulsions of the Ventricle, by a communication of the Nerves; the Cure of which *Sympathick Vomiting* depends on the Cure of the Primary Disease.

When the Stomach is Primarily Affected, it is because its Fibres are irritated to an Excretion by some matter which it cannot duly digest or overcome, or press forwards into the the Intestines, which matter becomes so disagreeing or refractory, either by its own offensive quality or quantity, or through the fault of the Stomach it self, its Tome being become lax, and its Fibres so weak, that they are not able to brook or indure the Chyle it self, much less the Excrementitious humours, but cast all forth by Vomiting: There being various cases and manners of affecting of both these, we shall here briefly set down some of the chief of them together with the Remedies.

The Emetick matter subsisting in the Ventricle, is either brought into it from elsewhere, or what for want of digestion, or because it is vitiated, is engendred there; in either respect, the present offensive load is first of all to be carried off, and then care must be taken to prevent any farther supply of it.

To cleanse the filthy Mass of viscous matter forth of the Stomach, prescribe a gentle Vomit of *Carduus Posset-drink*; or of *Oxymel*, or *Wine* of *Squills*, or of a Decoction of the Flowers of *Chamomil*, or of the Roots of *Eupatorium*, or give a Solution of the *Salt* of *Vitriol*, or such like; then let the remainder be gently carried off by *Glisters*, or by a *Purge* of *Pilulæ Mastichin*: or *Pil. Stomach. cum Gummis*, *Tinctura Sacra*, or an Infusion of *Rhubarb*.

Moreover, when an impure or rank Blood, conveying ever and anon new Stores of offensive matter to the Stomach, either by the Arteries, or by the Gall-Vessels which often overflow, causes a dispostion to Vomit, *Bleeding* frequently affords relief, and therefore Women with Child troubled with Vomiting, are often Cur'd by this means; those things also do good which so temper the Blood, that they keep it free from breeding adust Excrements: Hence *Whey*, *Mineral Waters*, *Juices* of *Herbs*, *Sal Prunella*,

nella, and such like, for as much as they fuse the Blood, and convey its dreggy Particles some other way, often remove Vomiting dispositions. These sorts of Remedies may also be us'd in case a frequent and daily Vomiting proceeds (as some think it may) from the meetings and contest of the Bilous and Pancreatick humours, and from their regurgitation into the Ventricle.

The more frequent Vomiting, and harder to be Cur'd, is that which proceeds from a disagreeing matter, and consequently Emetick engendred within the Ventricle, to wit, by reason of the vitiated ferment of the Stomach, whatsoever is taken into it degenerates into an irritating Mass of Corruption; wherefore in this case, after that the filth of the Stomach is cleans'd forth by gentle Evacuatives, Remedies commonly call'd Digestives are generally us'd; which according as the fermenting Juice of the Stomach (being for the most part of a Saline Nature, and sometimes of a Sulphurous) is in a various state of fixtness, flowing, or adustion, are variously prescrib'd, and sometimes these, sometimes the others do most good.

In Belching and Acid Vomiting, these following Medicines may be try'd, and you may fix upon your method of Cure according to what you find agrees best.

Take Powder of Aron Compound an Ounce and a half, Salt of Wormwood two Drams, Sugar of Roses three Drams, make a Powder: give a Dram of it in the Morning, and at five a Clock in the Afternoon, in a little draught of Beer boil'd with Mace and a Crust of Bread, or give it in the distill'd Water, or Tincture of Roman Wormwood.

Take the Powders of Ivory, Crabs Eyes, and red Coral, of each two Drams, Calcind Coral one Dram, red Saunders, Cinnamon of each half a Dram, make a Powder: the Dose is half a Dram after the same manner.

Take the Powders of Lignum Aloes, yellow Saunders, Winters Bark, of each two Drams, of white Chalk six Drams, Sugar-Candy half an Ounce, with the Solution of Tragacanth in Mint Water as much as suffices, make a Past, and let it be form'd into Troches, weighing half a Dram; let the Patient take three or four of these thrice, or oftner in a day.

Take Tincture of Salt of Tartar an Ounce, the Dose is from a Scruple to half a Dram twice a day in some proper distill'd Water.

In hot and sharp or tartish Vomiting, Medicines endow'd with a sharp or tartish and vitriolate Salt are more proper. The famous Medicine of *Riverius* in this case does well.

Take Salt of Wormwood a Scruple, give it in a spoonful of Juice of Limmons.

Take prepar'd Coral two Drams, Salt of Wormwood a Dram and a half, Juice of Limmons four Ounces, let all stand in a large Glass,

add to it of ſtrong Cinnamon-water two Ounces, give a ſpoonful or two twice a day, firſt ſhaking the Glaſs.

Take Powders of Ivory and Coral of each two Drams, Vitriol of Steel a Dram, Sugar-Candy a Dram, mix them, then divide the whole into ſix or eight parts, of which take one part twice a day in ſome convenient Vehicle.

In this caſe, *Purging Mineral Waters* which have much *Nitre* in them, alſo Waters that come from an *Iron Mineral*, and likewiſe our *Artificial Chalybeate Waters* prove of notable effect.

When at any time the Stomach perverts the moſt part of what comes into it, into a bilous and bitteriſh Maſs of filthy corruption (as it often uſes to do) and for that reaſon is prone to frequent Vomitings, then both acid and bitter things are proper.

Take Elixir Proprietatis an Ounce, the Doſe is a Scruple twice a day in ſome fit Vehicle.

Take Rhubarb Powdred twenty five Grains, Salt of Wormwood a Scruple, Cinnamon-water half an Ounce, Juice of Limmons an Ounce, let it be taken alone, or with ſome other Liquor.

Take Powder of Aron Compound an Ounce and a half, white Chriſtals of Tartar three Drams, Vitriol of Steel a Dram, Sugar half an Ounce, make a Powder: the Doſe is half a Dram, or two Scruples every Morning, drinking after it a draught of the Tincture of Roman Wormwood, or ſome Coffee.

Take Powder of Crabs Eyes half an Ounce, Chalybeat Tartar two Drams, Sugar-Candy a Dram, make a Powder: the Doſe is half a Dram, with a fit Vehicle twice a day.

Oftentimes the cauſe of a frequent and habitual Vomiting, is not ſo much the matter irritating the Ventricle, as the extream debility of its Nervous Fibres, which are neither able to Concoct what is taken into the Stomach, nor to endure the weight or burthen of it, but are preſently irritated by any thing lying upon them, and ſtir up the Carnous Fibres to Excretory Convulſions.

There are two principal cauſes of this ſort of Affect, *viz.* either the debility of the Stomach ariſing from the Fibres themſelves, is gotten by diſorder in eating and drinking, ſo that thoſe Fibres, for as much as they are beyond meaſure extended or over-heated, and as it were ſcorch'd, are not capable of admitting or containing a ſufficient plenty of Animal Spirits: Or Secondly, Theſe Fibres though they may be well enough diſpos'd of themſelves, yet for that the Nerves are in ſome other place obſtructed, they are deſtitute of a due Afflux of Spirits, whence becoming languid and flaxid, they cannot bear what is taken in, but preſently finding themſelves over-charged, throw all forth by Vomiting.

In

In the former Affect, thoſe Remedies are indicated, which by their Styptick force cauſe the too much diſtended and tenuated Fibres to corrugate and contract themſelves into a ſhorter ſpace; alſo ſuch as by their moſt grateful refreſhment enliven their languiſhing Spirits, and allure others more plenteouſly to them.

Take Mynſicht's *Elixir of Vitriol an Ounce, give from ten Grains to fifteen twice or thrice a day in a ſpoonful of the following diſtill'd Water, drinking ſeven or eight ſpoonfuls of the ſame after it.*

Take Cypreſs Tops ſix handfuls, Clary Leaves four handfuls, the outward Coats of twelve Oranges, Cinnamon, Mace, of each an Ounce, the Roots of Cyperus and the leſſer Galingal of each half an Ounce, being ſlic'd and bruis'd, let them be put into eight pounds of Brunſwich Beer, and diſtill'd in an ordinary Still.

Take Tincture of the Balſam of Tolu, extracted with the Tincture of Salt of Tartar an Ounce: the Doſe is twenty Grains with the ſame Vehicle: the Tincture of Wormwood prepar'd with the ſame Menſtruum may alſo be try'd.

Take Powder of the Leaves of Wormwood and Myrtle dri'd in the Sun in the Summer time, of each two Drams, Cinnamon, Flowers of red Roſes of each a Dram, Cubebs, Roots of the leſſer Galingal of each half a Dram, red Coral prepar'd a Dram; make of all a ſubtle Powder, then with ſix Ounces of double refin'd Sugar diſſolv'd in Cinnamon-water, and boil'd up to a conſiſtency, make it up in little Cakes, weighing half a Dram, let one or two of theſe be eaten often in a day, as the perſon pleaſes.

Take Conſerve of red Roſes vitriolated four Ounces, Myrobalans condited ſix Drams, Ginger condited in the Indies half an Ounce, Species of Hyacinth two Drams, the reddeſt Crocus Martis one Dram, Syrup of Corals what will ſuffice, make of all an Electuary, the Doſe is a Dram twice a day, drinking after it a little draught of the diſtill'd water.

In the debility or reſolution of the Ventricle, by reaſon of the Nerves being ſomewhere elſe abſtructed, Paralytick Remedies joyn'd with Stomachicks muſt chiefly be inſiſted on.

Take Elixir Proprietatis Tartariz'd an Ounce, the Doſe is a Scruple twice a day, with the water above preſcrib'd. The Tinctures of Salt of Tartar, of Coral, of Antimony may be us'd after the ſame manner. In this caſe alſo the ſweet ſpirit of Salt, the ſpirit of Sal Armoniack, or its Flowers are of great effect: Moreover Vomits, Purges, and even Diaphoreticks are often ſucceſſively adminiſtred, I have known this Diſtemper ſometimes happily Cur'd by Bathing in our hot Baths at Bathe.

CHAP. III.

Inſtructions concerning Purging, with preſcripts of Purges.

AS Nature often Purges it ſelf according to three Degrees, ſo there are three Degrees of Purging by Medicine.

The firſt is ſoft and eaſie, gently expelling any looſe matter contain'd in the Ventricle and the Inteſtines.

The ſecond reaches not only that, but Purges likewiſe other humours from the Bilous and Pancreatick Paſſages, and from the Mouths of the Veſſels.

The third performs all this, and that in a more full manner, and going yet farther, ſtrongly Purges from the Blood, and conſequently from the Nervous Juice and other parts, an Excrementitious matter which is brought by the Arteries into the Inteſtines.

As for what concerns the choice to be us'd in Purging Medicines, though we do not approve of thoſe cry'd up Claſſes of Medicines appropriated to this or that Juice or Humour; yet we do not think that all Purges are indifferently to be us'd in all caſes, but that there is need of a ſtrong Judgment, and a wary circumſpection in a Phyſician, that according to the ſtrength of his Patients, their temperament, the ſtate and ability of the Viſcera, their bearing, cuſtome, and fancy, and ſo according to the nature, of the Diſeaſe, its time and quality, he preſcribe a Purge more gentle or ſtrong; and that of hot things, or temperate, gentle or more ſmart, and in a ſolid ſubſtance or a liquid, or ſomething of ſome other certain kind and form, as he ſhall ſee good.

A Purge therefore being not convenient at all times, nor in every ſtate of Body; to proceed as we ought, we muſt take a fit ſeaſon, and uſe a certain preparation, and both theſe have regard to the firſt paſſages, and to the Maſs of Blood.

As to the firſt, if at any time the Stomach be loaded with a Maſs of viſcous Phlegm, or troubled with the boiling of Turgid Choler, a Purge moſt commonly either becomes of no effect or does hurt, unleſs thoſe contents are firſt of all cleans'd forth by a Vomit, or unleſs their oppreſſion and effervescency be corrected by digeſtives.

As to what regards the Blood, a Purge is often unſeaſonable, ſometimes alſo inconvenient, and in neither of theſe caſes Preparatives commonly ſo call'd, but only Alteratives are proper, for the

the buſineſs is not to diſpoſe thoſe imaginary humours for evacuation, but the Blood it ſelf ought to be reduc'd from its troubled and confuſed ſtate to a calm condition, or from its debility and fall'n Craſis to its vigour and ev'n temperament. Whilſt the Blood Feaveriſhly boiling is diſturb'd in its mixture, Purging is always found hurtful; and ſo whilſt its Maſs being become languid and weak, does not ariſe to its due fermentation, that ſort of Evacuation is no leſs forbidden. Moreover, when the Blood is too bilous or watry, or too much inclin'd to Coagulations or Fuſions, Purges for the moſt part do not take away thoſe its defaults or depravations, but moſt commonly encreaſe them: Wherefore in thoſe caſes altering Remedies are rather Indicated which may deſtroy the undue Separations and Combinations of the Salts, Sulphur and Serum, and take away other their enormities. Of theſe Digeſtives and Alteratives which ſupply the place of common Preparatives, we ſhall ſpeak particularly hereafter.

The chiefeſt Compoſitions of Purging Medicines being *Potions*, *Powders*, *Bolus's*, *Electuaries*, *Morſels* or *Tablets*, and *Phyſick-Ales* or *Wines*, we ſhall here ſet down certain of the more Select Forms of each of them, and thoſe of a threefold kind, according as the operation of the Medicine ought to be gentle, mean, or ſtrong; to which in the fourth place we ſhall add Preſcripts of eaſily prepar'd Purges for poor People.

1. Gentle Potions. *Take Rhubarb ſlic'd three Drams, yellow Saunders half a Dram, Salt of Tartar a Scruple, make a cold Infuſion all Night in Cichory water and White-wine, of each two Ounces and a half, to three Ounces of Cleer ſtraining, add Syrup of Cichory with Rhubarb half an Ounce, Cinnamon water two Drams, make a Potion.*

2. Mean Potions. *Take of the beſt Senna three Drams, Rhubarb, Troches of Agarick of each a Dram and a half, yellow Saunders two Scruples, Salt of Tartar half a Dram, Coriander-ſeeds a Dram; let them have a cloſe Infuſion all Night in Spring-water and White-wine made warm, of each three Ounces, to four Ounces of it ſtrain'd, add of the Purging Syrup of Apples an Ounce, Aqua Mirabilis two Drams, make a Potion: Or, Take the decoction of Senna Gerionis four Ounces, Syrrup of Roſes Solutive an Ounce, Cream of Tartar half a Dram, Cinnamon water two Drams, make a Potion.*

Take the beſt Senna, Caſſia Fiſtula, Tamarinds, of each half an Ounce, Coriander-ſeeds two Drams, boil all in ten Ounces of Spring-water, till a third part be conſum'd, ſtrain it, and Clarifie it with the White of an Egg, add to it the Syrup of Apples an Ounce, make a Potion.

3. Strong Potions. *Take of the decoction of Sena Gerionis (with the addition of the ſtrings of black Hellebore and Agarick, of each a*

Dram and a half) six Ounces, Syrup of Roses Solutive, or of the flowers of Peaches an Ounce, Aqua Mirabilis two Drams: Or,

Take of the best Sena half an Ounce, strings of black Hellebore, Turbith, of each two Drams, yellow Saunders a Dram, Coriander-seeds a Dram and a half, Salt of Tartar half a Dram; let it infuse close all Night in eight Ounces of White-wine made warm, to five Ounces of the Cleer straining, add of the Electuary of the Juice of Roses three Drams, Syrup of Buck-thorn six Drams, Cinnamon water two Drams, make a Potion.

Potions of easie preparation for the Poor. *Take of Flaxweed a handful, sweet Fennel-seeds two Drams, boil them in a sufficient quantity of Spring-water till it comes to six Ounces, add to it of White-wine two Ounces, make a Potion. After the same manner you may make a Purging Potion of the Flowers of Damask Roses; also of Peach Leaves, and so of the Roots of Eupatorium Avicennæ.*

PILLS. First of a gentle Operation. *Take of Stomach Pills with Gums, from a Scruple to half a Dram, Tartar vitriolated two Grains, Balsam of Peru what will suffice, make thereof three or four Pills. After the same manner may be made Pills of the mass of Pilul. Ruffi, of Pilul. Mastichin: of Pilul. de Succino, and of our extract Solutive, the description of which you may find in our Tract of the Scurvy.*

2. Mean Pills. *Take of Stomach Pills with Gumms half a Dram, Rosin of Julap from four Grains to ten, Tartar vitriolated six Grains, Ammoniacum dissolv'd, as much as will suffice, make four Pills. After the same manner may be made Pills of the mass of Pilulæ de Succino, Tartari Quercitani: Also instead of Rosin of Julap, you may put Scammony Sulphurated, from six Grains to twelve, or Rosin of Scammony from eight Grains to fourteen. Or, Take Stomach Pills with Gumms a Scruple, Rosin of Julap from six Grains to twelve, Balsam of Peru as much as will suffice, make four Pills.*

3. Strong Pills. *Take Pilulæ Rudii half a Dram, Rosin of Julap from eight Grains to twelve, Balsam of Peru what will suffice, make four Pills to be taken* cum Regimine. *After the like manner Pills may be made of the mass of Pilulæ Cochiæ, de Sagapeno. Take of Pilulæ ex duobus from a Scruple to half a Dram, Calamelanos a Scruple, make four Pills to be taken* Cum Regimine.

4. Pills easily prepar'd, and cheaper. *Take Powder of the best Jalap two Drams, Diagridium a Dram, Cloves, Ginger, of each a Scruple, Ammoniacum dissolv'd, as much as will suffice, make a mass, the Dose is half a Dram.*

Take of Pilulæ Cochiæ, from half a Dram to two Scruples, let four Pills be made.

POWDERS. First, such as are gentle. *Take of Rhubarb Powdred half a Dram, Salt of Wormwood half a Scruple, Cloves two Grains,*

Grains, make a Powder, give it in a ſpoonful of ſmall Cinnamon-water, or in a little Broath.

Take of the greater Compound Powder of Sena, from half a Dram to a Dram, in a little draught of Poſſet-drink.

Take Powder of the Leaves of Sena a Scruple, Calamelanos ſeventeen Grains, yellow Saunders half a Scruple, make a Powder, give it in a ſpoonful of Panada.

2. Mean Powders. *Take Powder of Diaſena a Dram, Cream of Tartar a Scruple, make a Powder, give it in a little draught of Broath.*

Take Roſin of Jalap ten Grains, Calamelanos a Scruple, Cloves ſix Grains, make a Powder, and take it after the ſame manner.

Take Species of Diaturbith with Rhubarb, from half a Dram to a Dram, Cream of Tartar from a Scruple to half a Dram.

3. Strong Powders. *Take Turbith, Hermodacts of each three Drams, Diagridium a Dram, Ginger a Scruple, make a Powder, the Doſe is from half a Dram to a Dram.*

Take Pulvis Cornachini a Dram; after the ſame manner may be given the Compound Powder of Hermodacts; alſo the Hydrotick Powder of Riverius.

4. Cheap Powders and eaſie to be got. *Take Powder of the Roots of the beſt Jalap a Dram, Ginger a Scruple, give it in a little draught of White-wine; ſo you may give Powder of the Roots of Mechoachan, alſo of the Leaves of Sena in any Liquor.*

BOLUS's and ELECTUARIES. Firſt, ſuch as work gently. *Take of the Lenitive Electuary half an Ounce, Cream of Tartar half a Dram, Syrup of Roſes what ſuffices, make a Bolus. Take freſh Caſſia half an Ounce, Powder of Rhubarb half a Dram, Cream of Tartar a Scruple, Syrup of Roſes as much as ſuffices, make a Bolus.*

2. Mean. *Take of the Lenitive Electuary half an Ounce, Cream of Tartar half a Dram, Roſin of Julap ſix Grains, Syrup of Roſes what ſuffices, make a Bolus.*

Take of the Electuary Diaphœnicon half an Ounce, of the Compound Powder of Hermodacts half a Dram, Syrup of Elder what ſuffices, make a Bolus.

3. Strong Workers. *Take of the Electuary of the Juice of Roſes half an Ounce, Roſin of Julap ten Grains, Cream of Tartar half a Dram, Syrup of Elder what ſuffices, make a Bolus.*

Electuaries are Compounded of the ſame things made up in a greater quantity, by adding Conſerves of Damask Roſes, or of the Flowers of Peaches; the Doſe is the quantity of a Cheſnut to be taken betimes every Morning, or twice or thrice a Week.

4. Bolus's and Electuaries eaſily prepar'd. *Take Powder of the Roots of Julap an Ounce, of Mechoachan half an Ounce, of Ginger two Drams, of Cloves a Dram, Cream of Tartar three Drams, Salt of*

Wormwood a Dram, Sugar two Ounces, Syrup of Roſes Solutive what ſuffices, make an Electuary, the Doſe is the quantity of a Wallnut.

Confectio Solutiva, & Paſſulæ Laxantes, the Diapranum of Sylvius *in the* 30. *Page of his Practice of Phyſick.*

5. Morſells or Tablets of a mean operation. *Take Powder of Mechoacan, Gummous Turbith of each half an Ounce, Scammony ſulphurated two Drams, Roſin of Jalap a Dram, yellow Saunders a Dram, Cream of Tartar two Drams, Conſerve of Violets an Ounce, Sugar diſſolv'd in Roſe-water, and boil'd up to a fit conſiſtency a Pound. Make Tablets according to Art, each weighing a Dram, the Doſe is one or two. The Purging Tablets of Sylvius, Page the* 28. *of his Practice of Phyſick.*

6. Phyſical or Purging Wines and Ales of a mean operation. *Take Leaves of Sena an Ounce and a half, Turbith, Mechoacan of each ſix Drams, ſtrings of black Hellebore three Drams, Cubebs, Galingal Roots, choice Cinnamon of each two Drams: Put all in a large Glaſs, with four Pounds of Rheniſh-wine, adding to it Salt of Tartar a Dram and a half, let it ſtand cold and cloſe cover'd for ſix days, add to it Sugar-Candy three Ounces, ſtrain it through Hippocrates Sleeve, the Doſe is three or four Ounces.*

Take Leaves of Sena three Ounces, Roots of Polypody of the Oak, and of ſharp Pointed Dock prepar'd, of each two Ounces, Turbith, Mechoacan, of each an Ounce and a half, Epithymum, yellow Saunders of each an Ounce, Coriander-ſeeds an Ounce and a half; let them be ſlic'd and bruis'd, and put in a Bag according to Art, for four Gallons of Ale. the Doſe is from twelve Ounces to a Pound, either every Morning, or twice or thrice a Week.

CHAP. IV.

A Cure for Over-purging, or of Medicines that ſtay too much Purging, or a Looſeneſs: Alſo the Cure of the London-*Flux; with Inſtructions in each Caſe.*

TO prevent over-purging upon giving any Purging Medicine, we muſt proceed thus: Before we give a Purge, we muſt firſt conſider well the Conſtitution, Strength and Cuſtome of the Body to be Purg'd; as alſo the Nature, Doſe, manner of Working, and ordinary effects of the Medicine to be given, and then by

by comparing the one with the other, we muſt proportionate the vertue of the Agent according to the bearing of the Patient. Secondly, whilſt the Medicine is working, let the Viſcera where digeſtion is perform'd, the Blood, and the Animal Spirits be kept free from any other perturbation: Wherefore during that time, let not the Patient eat groſs or viſcous food, or too great a plenty of any food, which may offend the Stomach, let him carefully avoid the admittance of any outward cold, by which the Pores of the Body are ſhut up, alſo let the mind be kept calm and undiſturb'd, free from all Cares and toilſome Studies. Thirdly, The Operation of the Medicine being ended, we muſt appeaſe the angry rage of the Animal Spirits, and allay the effervеſcence of the Blood and Humours; for which ends let an Anodine Medicine, or a gentle Hypnotick be given according to the following forms.

Take Water of Cowſlip Flowers two Ounces, Cinnamon-water hordeated, Syrup of Mæconium, of each half an Ounce, Pearls half a Scruple, make a draught to be taken going to reſt: Or,

Take Conſerve of red Roſes vitriolated two Scruples, Diaſcordium half a Dram, Pearls half a Scruple, Diacodium what ſuffices, make a Bolus to be taken going to ſleep.

In caſe this Proviſion be either omitted, or does not hinder a Purging Medicine from working to exceſs, let the Patient preſently be put into a warm Bed, and be ordered as follows. Firſt, Let either a Plaiſter of *Mithridate* be apply'd to his Stomach, and to the whole upper Region of the Belly; or let thoſe parts be fomented with warm Linnen Cloaths, dip'd in a decoction of *Wormwood, Mints, and Spices in red Wine*, and ſo wrung forth; preſently upon it let him take inwardly either a Bolus of *Venice Treacle*, or a Solution of it in *Cinnamon-water*. Moreover, let him drink every now and then a ſpoonful or two of Burnt-wine, diluted with a little Mint-water; if he be troubled with Gripes, give him a Gliſter of warm Milk with Treacle diſſolv'd in it, and warm frictions muſt be us'd to the remote parts, and ſometimes Ligatures to draw the Blood outwards, and ſo keep it from too great a Colliquation, and from diſcharging it ſelf into the Cavities of the Viſcera; then in the Evening if there be ſtrength, and a pretty good Pulſe, let him take a Doſe either of *Diacodium*, or of *Liquid Laudanum* with ſome fit Vehicle.

As to other kinds of exceſſive Purging, which are wont to happen without the Adminiſtration of a Purging Medicine, for the moſt part they are meerly Symptomatical, depending on other Diſeaſes, and their method of Cure is wholly the ſame as of thoſe Diſeaſes, whoſe off-ſpring they are: Nevertheleſs ſometimes a Looſeneſs, or Flux ſeems to be a Diſeaſe of it ſelf, and becauſe this kind of Diſtemper Raging almoſt yearly in the City of *London*,

don, is commonly accounted Endemious, or a Diſeaſe peculiarly attending Inhabitants, I ſhall here ſet down its method of Cure.

I have often and long obſerv'd that there are two, and that very different kinds of that Flux (uſually call'd the *Griping of the Guts*) which happens here almoſt yearly about Autumn: In one of them the Stools are watry, and in a manner cleer, with a ſudden failing of the ſtrength; in the other they are bloody, but tolerable withal.

In the Year 1670. about the Autumnal Equinox, a World of People here were ſeized with a moſt dangerous Flux (though without Blood) and joyn'd with a cruel Vomiting, which preſently caus'd great faintings, and a total decay of ſtrength.

For the Cure of this Diſeaſe no Evacuation did good, nay Bleeding, Vomiting, and Purging always did hurt; only Cordials, and thoſe of the hotteſt nature, to wit, ſuch as abounded with Spirit and Sulphur, or a Volatile Salt prov'd commonly of good effect; inſomuch that *Brandy* burnt a little with Sugar was a Popular, and as it were Epidemick Remedy, and in that ſort of Flux was ſeldome given without ſucceſs, though in the other ſort of Flux which carry'd Blood with it, having been us'd without due regard, it has often been found to be hurtful: The method of Cure which I then took ſucceſsfully enough with many, and am wont ſtill to take in the like caſe, is after the following manner.

Take Venice Treacle from a Dram to a Dram and a half; let the Patient take it in Bed, and drink after it ſeven or eight ſpoonfuls of the following Julap, and let him repeat this Doſe every third, fourth, or fifth hour.

Take Mint-water, Cinnamon-water hordeated, of each three Ounces, ſtrong Cinnamon-water, Plague-water, Treacle-water, of each two Ounces, Powder of Pearls a Dram, Sacchari Cryſtalin. half an Ounce, mingle them and make a Julap: At the ſame time take a piece of Bread, ſpread ſome Treacle on it, and dip it in Sack or Red-wine warm'd, and let it be apply'd to the Stomach as hot as it may be ſuffered, and change it every now and then.

In the Evening, if the Pulſe and Breathing ſeem ſtrong enough to bear it, let the Patient take of Liquid Laudanum Cydoniated twenty Grains in a draught of Plague-water.

Take Diaſcordium a Dram, Liquid Laudanum half a Scruple, Compound Powder of Crabs Claws a Scruple, Cinnamon-water what ſuffices, make a Bolus to be taken going to ſleep.

To thoſe to whom *Treacle* or *Mithridate* prove nauſeous or diſagreeing, give a Doſe of the following Powder, or *Spirit of Treacle* every third hour, with the Julap.

Take

Take Compound Powder of Crabs Claws, Roots of Contrayerva, or Serpentaria Virgin, of each a Dram, Cinnamon, Roots of Tormentil, of each half a Dram, Saffron, Cochinele of each a Scruple, make a Powder, the Doſe is from half a Dram to two Scruples.

Take Spiritus Theriacalis Armoniacus three Drams, the Doſe is a Scruple, with the Julap every fourth hour, or give that, and the Doſes of the Powder interchangeably, one, one time, and the other, the other: After the ſame manner the Spirits of Harts-horne. or of Soot may be given; let the perſons Drink be Ale or Beer with a Cruſt of Bread, Mace, add Cinnamon boil'd in it and ſweeten'd; or let it be Burnt-wine diluted with Mint-water; let his Food be Chicken-broth, Gruel or Panada, with the ſhavings of Ivory, Hartſhorn, and the Roots of Scorzonera, &c. boil'd in it.

About the Autumnal Equinox, in the Year 1671. a deſperate Bloody Flux ſeiz'd on many perſons in this City; from the firſt ſeizing they voided Blood by ſeige in abundance, and that frequently, and for the moſt part it was attended with a Belly-ach, and Gripes, continual watchings alſo with a Feaver, and a mighty thirſt uſually troubled them; nevertheleſs their ſtrength held commonly pretty well for ſome conſiderable time, and if the Flux were ſtopt ſooner than it ought, it rendred the Patients conditions worſe.

The method of Cure, with the Remedies which I found to give Relief in many perſons, was according to the following manner.

Take Venice-Treacle a Dram, Liquid Laudanum Cydoniated twenty Grains, make a Bolus to be taken going to reſt.

Take Conſerve of red Roſes vitriolated two Ounces, Venice-Treacle an Ounce, Powders of the Roots of Tormentil, Contrayerva, Pearl, Coral prepar'd, of each a Dram, Syrup of dry'd Roſes what ſuffices, make an Electuary to be taken every fourth or fifth hour, and let the perſon drink after it of the following Julap three Ounces.

Take the Waters of Mint, Baum, Cinnamon hordeated, of each four Ounces, Treacle-water, Plague-water, of each two Ounces, Pearl a Dram, Sugar an Ounce, mingle them and make a Julap.

After a day or two give a Purging Potion, which leaves an Aſtringency.

Take Rhubarb ſlic'd two Drams, yellow Mirobalans ſlic'd a Dram and a half, red Saunders, Cinnamon of each a Scruple; let them infuſe all Night in the Waters of Plantain and Cinnamon hordeated, of each two Ounces and a half, wring it forth hard, then add of ſtrong Cinnamon-water a Dram and a half, make a Draught.

Every Evening, and alſo in certain caſes in the Day-time, I was wont to give a pretty large Doſe of *Laudanum*; nor have I ever known this Medicine to have done any prejudice to a perſon troubled

troubled with the Flux, which happen's either becauſe the Narcotick force of the Medicine is ſubdued, or made more gentle by the Acid Juice of the Stomach, or rather that its Particles which are tranſmitted to the Blood, are thence preſently caſt forth again with the Bloody Stools, ſo that they do not affect the Brain.

If the above-mention'd Electuary be found nauſeous to any perſon, or diſagrees with him, the following Powder may be given in its ſtead.

Take Pulvis Pannonici Rubri a Dram, Roots of Contrayerva half a Dram, make a Powder, divide it into three parts, and give one part in any Liquor.

Take Bole Armenick alexiteriated (that is, impregnated with the Juices of the Leaves of Tormentil, Biſtort, red Roſes, &c. and dry'd in the Sun) Roots of Contrayerva, of each a Dram, Pearl, red Coral, white amber, of each half a Dram, make a Powder: the Doſe is from two Scruples to a Dram.

Take the Roots of Avens and Scorzonera, of each an Ounce, of Tormentil, Biſtort and Contrayerva, of each two Drams and a half, burnt Hartſhorn three Drams, ſhavings of Ivory and Hartſhorn, of each two Drams, Cochinele half a Dram, red Roſe-leaves two Drams, boil all in a ſufficient quantity of Spring Water, till it comes to two Pounds, towards the end of the boiling add conſerve of red Roſes three Ounces, to the Cleer ſtraining add Plague-water four Ounces: the Doſe is three Ounces.

To appeaſe the Gripes and fretting of the Bowels, Glyſters are commonly preſcrib'd.

Take the decoction of the Tops of St. John's-wort, in which Sheeps Trotters or their Meſentery has boil'd eight or twelve Ounces, Venice-Treacle two Drams, Oyl of St. John's-wort an Ounce and a half, make a Gliſter.

The Therapeutick Indications into which the method before expreſt of curing the Bloody Flux may be reſolv'd, are chiefly four, &c. two regard the Blood, and as many the Viſcera. Firſt, as to the Blood, its recrementitious and depraved dreggs which tend inwards, muſt be driven forth into the habit of the body, that they may exhale by perſpiration, and its coagulations muſt be diſſolv'd, and its Craſis reſtor'd, as ſoon as may be. Secondly, as to what regards the Viſcera, the irkſome ſenſation of the Nervous Fibres, and the irritation of the Carnous Fibres to excretory Convulſions muſt be appeas'd, and the Mouths of the Veſſels muſt be ſhut, to keep them from diſcharging the blood and humours into the Inteſtines. The firſt of theſe is uſually perform'd with *Opiats*, and the other with *Stiptick* or *Aſtringent Remedies*: Beſides theſe we muſt have regard to urging Symptoms, and ill affects uſually attending this Diſeaſe, the chief of which are a

Fever

Feaver, with a Thirſt and Wakings, Gripings of the Guts, and ſometimes their fretting, Inflammation, and Ulcers.

We muſt not proceed upon thoſe four chief Indications ſeverally and ſucceſſively, but we muſt take them altogether, and ſet upon them at once; wherefore the Preſcripts ought to comprehend Remedies of divers kinds, to wit, *Alexipharmicks*, *Stypticks*, *Diaphoreticks* and *Opiats*: And becauſe it is not an eaſie thing to put theſe into a ſet method, and under ſet Rules, which may be generally apply'd; I have rather choſen to give you here ſome Examples of Cures perſormed by me in the Bloody Flux in the year 1671.

To a Gentleman 25 years of Age, to whom I was call'd the third day after he was ſeiz'd. I preſcrib'd the following Bolus.

Take Venice Treacle a Dram, Liquid Laudanum Cydoniated a Scruple, mix them, let him drink after it a little draught of the following Julap. Take waters of Tormentil, Mints, and Cinnamon hordeated, of each four Ounces, Treacle water and Plague water of each two Ounces, Pearl a Dram, Sugar an Ounce, make a Julap. He took beſides of the following Electuary about a Dram and a half every third hour, with the ſaid Julap.

Take Conſerve of Red Roſes two Ounces, Venice Treacle an Ounce, Powder of the Roots of Tormentil, Contrayerva, Pearl, Coral prepar'd of each half a Dram, Syrup of Red Poppies what ſuffices.

By the uſe of theſe Remedies the rigour of the Diſeaſe ſoon abated, ſo that he had not above ſix or ſeven ſtools in the ſpace of twenty four hours, and thoſe alſo were not very Bloody as before, but appear'd full of little flakes of Fleſh, and of fragments, as it were of Membranes: Every Evening he took an Opiate with Laudanum.

The Fifth day of his illneſs he took the following Potion.

Take Rhubarb ſlic'd two Drams, yellow Mirobalanes a Dram and a half, yellow Saunders half a Dram, Powder of Cinnamon a Scruple, Salt of Wormwood half a Scruple; let them infuſe all night in the waters of Plantain and Cinnamon hordeated, of each two Ounces and a half, to the ſtraining add ſtrong Cinnamon water two Drams

It purg'd him three or four times, and gave him eaſe, and the next day the Feaver being abated, he was better; ſo that ſeeming to grow well, he eat fleſh. But ſhortly upon it fell into a Relapſe, ſo that the Flux returning with the Feaver, it preſently became more violent than it was at firſt: Then becauſe the former Medicines began to nauſeate him, I preſcrib'd after the following manner.

Take Powders of Tormentil Roots, of Contrayerva, Bole Armenick, Alexiteriated, of each a Dram, Pearl, Red Coral prepar'd, White Amber,

ber, of each half a Dram, make a Powder, the Doſe is half a Dram in the following diſtill'd water.

Take Tops of Cypreſs and Myrtle, of each four handfuls, Leaves of Meadow-ſweet, Burnet, St. Johns-wort, Avens, of each four handfuls, Roots of Tormentil, Biſtort, of each ſix Drams, Red Roſe-flowers four handfuls, Kermes Berries four Ounces, Cinnamon, Mace, of each one Ounce. Being all ſlic'd and bruis'd together, pour to them Red Florence Wine, and Red Roſe water of each four pounds; diſtil all in a common Still; let the whole Liquor be mingled and ſweetned with Syrup of Coral. He took alſo three or four times a day of the following decoction three or four Ounces.

Take Roots of Avens and Scorzonera, of each an Ounce, of Tormentil two Drams, Hartſhorn burnt and powdred ſix Drams, ſhavings of Ivory and Hartſhorn, of each two Drams, Tops of St. Johns-wort a handful, Flowers of Red Roſes and Balauſtiæ, of each a pugil. Boil all in three pounds of fountain water, till it comes to two, adding towards the end of the boiling, of Red Lisbon wine four Ounces; let it boil cloſe cover'd for an hour, then let it be ſtrain'd through Hippocrates *Sleeve:*

Every night he took a Scruple of Liquid Laudanum in three Ounces of the Bloody Flux water ev'n now deſcrib'd, with three Drams of Syrup of Clove Gilly-flowers in it.

His common drink was a decoction of burnt Hartſhorn with Barley, a Cruſt of Bread, Mace and Cinnamon; to a Pint and a half of which, a Pint of new Milk was added.

He took the Purging Infuſion a ſecond time, by the uſe of which, and the things before mentioned, within ten days the Feaver left him, and the Flux became much more gentle, which though without Gripes or much Blood, yet ſtill continued with the little pieces of Fleſh, the fragments of Membranes, and a bloody Phlegm or Gelly, which daily came from him.

Therefore to ſtrengthen and heat the inteſtines, the following things were given.

Take Tops of St. Johns wort, Leaves of Perwincle and Mouſear, of each a handful, Red Roſe Flowers two pugils: Boil them in the Broath of a Sheeps Guts: To a pound of the Liquor ſtrain'd, add Oyl of St. Johns-wort two Ounces, Honey of Roſes an Ounce and a half: mingle them for two Glyſters, whereof one was given him in the Morning, the other at five a Clock in the Afternoon. He wore Emplaſt. de minio & Paracelſi upon his Belly. He took moreover twice a day three Ounces of Juice of Plantain wrung forth with water of Scordium and Plague water. He eat alſo every day a Quince made hollow, and fill'd with the Powders of Olibanum, Maſtick, and Balſam of Tolu, and ſo roſted in the Embers.

By

By the conſtant uſe of theſe Remedies, he grew perfectly well within a Month.

About the ſame time another robuſt young man, fell into a dreadful Bloody Flux; from the firſt day he was ſeiz'd, frequent ſtools and very bloody, preſently brake forth with violence, being accompanied with a Pain and Gripes: Moreover a ſtrong Feaver, with a cruel Vomiting, Thirſt and Wakings moleſted him. Theſe Symptoms being a little mitigated with Opiats, a Delirium and a Vertigo, with an intermittent Pulſe, and horrible extenſions and contractions of his Limbs preſently ſeiz'd him; this happning becauſe the malignant matter which was inwardly reſtrain'd, preſently flow'd into the Brain and Nerves: Nevertheleſs as often as the Looſeneſs and Vomiting return'd, theſe affects were preſently appeas'd. On the fifth day Vomiting up a bloody matter, he complain'd of a great torture in his Stomach, and of a Pain, as though it were Ulcerated, and in truth I ſuſpected that there might be a beginning of ſome Inflam'd Bliſters, or Ulcers in it, as it uſually happens in the Inteſtines; but by giving him Emollient Broths with Milk in them, his Vomiting and the tortures of his Stomach ſoon ceaſed, his Flux in the mean time encreaſing. He took that night of *Diacodium an Ounce, Courſlip water and ſmall Cinnamon water, of each an Ounce and a half*; by which Medicine he was ſo much reliev'd, that in twenty four hours ſpace his Vomiting and Pains left him, and he was only troubled with a few Stools, and having a good indifferent Pulſe, and frequent Sleeps, he was pretty well; yet the following night, though he took again the ſame Opiate, his Flux return'd, and that with very frequent Stools, and bloody as before. The next day after, he took an *Infuſion of Rhubarb with Mirobalans, Red Saunders and Cinnamon*: He often voided Bilous and very ſharp Excrements, but without the leaſt of Blood; then in the Evening he took *Liquid Laudanum Cydoniated twenty five Grains in a good ſpoonful of Cinnamon water hordeated*; he had moderate and quiet Sleeps. Afterwards loathing any more Medicines, he took only an Opiate every Evening, ſometimes of one ſort, and ſometimes of another, and in a ſhort time grew very well.

CHAP. V.

Inſtructions concerning Diuretick Medicines, or ſuch as work by Urine, with Diuretick Preſcripts.

THe chief Scopes, or ends of Diuretick Medicines, are as follows.

Firſt, If at any time the Blood becomes ſo compact and tenacious from a fixt Salt, Sulphur, and Earth fermented together, and mutually combin'd in it, that the Watery Particles do not eaſily ſeparate from the reſt, Diureticks fit to looſen its Texture, and to fuſe the Serum, muſt be ſuch as excel in a volatile or acid Salt; for ſuch Particles chiefly diſſolve any coalitions caus'd by a fixt Salt. But in regard this diſpoſition is common both to a Feaver and the Scurvy, in the former affect, the moſt proper Diureticks are the temperate *Acids of Vegetables*; alſo *Sal Nitre*, the *Spirits* of *Sea-Salt*, of *Vitriol*, &c. And likewiſe ſuch as have a *Volatile Salt*, as the *Spirits of Hartſhorn*, of *Sal Armoniack*, *Salt of Amber*, of *Vipers*, and others of this kind which we have alſo rang'd amongſt Diaphoreticks. In a Scorbutick diſpoſition when the Urine is but in a ſmall quantity and thick, the Juices of Herbs, and preparations both of a *ſharp*, or *tart* and *acid* nature are of excellent uſe; alſo *Salt and Spirit of Urine*, of *Sal Armoniack*, of *Tartar*, &c.

Secondly, Sometimes the Blood does not retain the Serum long enough within its Body, but either being obnoxious to Fluxions, or rather Coagulations, it depoſes it here and there in a great abundance, even more than enough; whence it breeds Catarrhs, or Tumours in many places: Or, the Blood being become of a weak habit, and withal of a depraved conſtitution, to wit, inclining to a ſourneſs its apt to coagulate, as to its more groſs Particles, ſo that the more ſubtle Particles being every where thrown off in circulating, and falling on the weaker parts, cauſe ſometimes diſtempers of the Head or Breaſt, ſometimes an Aſcites, or Anaſarca: And we ſhall hereafter ſhew how a Diabetes happens from the like cauſe: And in truth many difficult Diſeaſes which are falſly imputed to the ill conſtitution of the Viſcera, ariſe from hence, *viz.* that the Blood being diſtemper'd and obnoxious to coagulations, when it cannot continue its full courſe of circulation, depoſes the Serum in many places, this being too apt of it ſelf to recede from it. The Diureticks to be given in theſe caſes, are ſuch as do not fuſe the Blood, but make void its coagulati-

ons;

ons; of this kind are those things that are endow'd with a *fixt Volatile*, and likewise *Alkalisate Salt*; and they must be such as restore and strengthen the Ferment of the Reins, which is done by certain *Sulphureous* and *Spirituous* things. For these ends are given *Sulphureous and mixt Diureticks*, *Lixivial Salts of Herbs*, *Powders of shells*, *Salt and Spirit of Urine*, &c. *Millepedes*, *Horse-Raddish*, *Parsly-seed*, *Nutmegs*, *Turpentine*, and preparations made of it, *Spirit of Wine*: The vertues of all which are not to fuse the Blood, and to precipitate serosities from its Mass (these things are chiefly done by Acids, and in those cases do commonly hinder any Purging by Urine) but to dissolve the coagulations of the Blood; so that its Body recovering a perfect mixture, and being more readily circulated through the Vessels, drinks up the Serum every where extravasated or depos'd, and finally delivers it to the Reins to send it forth. Now we shall shew after what manner according to both these, as it were opposite, ends of Curing, Diureticks of all kinds operate, and in what forms they are chiefly prescrib'd.

The Kinds and Prescripts of Diuretick Medicines.

FIrst then, as to *Saline Diureticks*, we say that any Salts whatsoever of a differing nature being put together, lay hold of each other, and are presently join'd in one, and that whilst they are so combin'd, other Particles freed from the mixture, separate from each other, or fly away. This is plainly seen when a fluid or Acid Salt is put to a fixt, or Alkalisate Salt; and so when a fluid or fixt Salt is put to a Volatile, or a *sharp* Salt; and indeed on this only disposition of Salts, depends the whole business of Solutions and precipitations of what kind soever: Wherefore since the Blood and humours of our Body very much abound with Salt, which Salt is also wont to be variously chang'd from one state to another, and so to cause a Morbid disposition; and likewise since Saline Diureticks are of divers kinds, to wit, consisting of fixt, fluid, nitrous, volatile, or Alkalisate Salts, it will always require a great discretion and judgment in a Physician to see that the Saline Particles in the Medicine differ from those in our Body: We shall shew after what manner this ought to be done, by running through each Species of Diuretick Salts.

Amongst Diureticks containing an Acid Salt, Spirit of Salt, or of Nitre; also Juice of Limmons, of Sorrel, Whitewine, Rhenish and Cyder, are of chiefest note amongst the vulgar, and pretty often perform that intent, for these things without the help of others

others fuſe the Blood, and precipitate it into ſerofities; as when an Acid is dropt into boiling Milk; but this does not happen equally to all perſons, nor to every one alike. In a ſound conſtitution, or not very far from it, the Salt of the Blood is partly fixt, partly nitrous, and partly volatile; alſo in ſome Scorbutical and Hydropical perſons, it becomes for the moſt part fixt: In every of theſe caſes Diureticks containing an Acid Salt are given with ſucceſs; but in Catarrhous affects, and in ſome Hydropical and Scorbutical diſtempers, when the Salino-fixt Particles of the Blood are exalted to a ſtate of flowing, and the volatile are depreſt, (as it often happens) Medicines of an Acid nature commonly rather do hurt than good; inſomuch as they more pervert the Blood already degenerated from its Craſis, and Medicines containing a fixt or volatile Salt, are more proper to be us'd by ſuch perſons.

Preſcripts of Diureticks that have an Acid Salt for their Baſis.

TAke choice white Tartar powder'd, Cryſtal Mineral of each a Dram and a half, Powder of Crabs Eyes a Dram: Make a Powder, the Doſe is from half a Dram to two Scruples in a fit Vehicle, repeating it every ſixth or eighth hour.

Take Tartar vitriolated or nitrated two Drams, Powder of Eggſhells a Dram and a half, Seeds of Parſly, or of wild Carrots half a Dram: Make a Powder, the Doſe is half a Dram, after the ſame manner.

Take of the beſt Spirit of Salt two Drams, Hartſhorn burnt and powdred, what will ſuffice to imbibe it: Make a Powder, the Doſe is from a Scruple to half a Dram.

Take Juice of Limmons two Ounces, Radiſh water Compound, an Ounce and a half, Syrup of the five Roots three Drams: Make a Potion.

Take Juice of Sorrel two Ounces, Whitewine ſix Ounces: Mingle them for a Potion.

Take Radiſh water Compound two Ounces, Water of Pellitory of the Wall four Ounces, Spirit of Salt a Scruple, twenty five drops, Salt of Tartar fifteen Grains, Syrup of Violets half an Ounce: Make a Potion.

That Medicines containing a fixt or Lixivial Salt move Urine, it plainly enough appears from the Vulgar and Empyrical Practice of Phyſick, which commonly gives them for Curing Hydropical perſons: For its a uſual thing in an Anaſarca, and ſometimes in an

an Aſcites, when the Viſcera, or Fleſhy parts are very much ſwollen by a loading of Waters: To give a *Lixivium made of the Aſhes of Wormwood, or of Broom, or of Bean-ſtalks with Whitewine*, whence it frequently happens that a very plentiful evacuation by Urine follows, and that the Diſeaſe is taken away. Nevertheleſs I have obſerv'd that this Medicine has not prov'd Diuretick to ſome perſons, and rather to have encreaſt the Hydropical diſpoſition, than to have cur'd it. The reaſon of which if we enquire into, we ſhall find by what is ſaid before, that Lixivial Salts neither fuſe Milk, nor Blood, or precipitate them, and therefore that they are not Diuretick in their own nature, though that effect ſometimes follows; becauſe that a fixt Salt taken in a good plenty, deſtroys the Energy of the Acid, and coagulative Salt predominating in the Blood; ſo that the ſaid Blood, which before being too apt to fuſion, and unable to contain its Serum, did caſt it off from it ſelf in divers places, now by the interceſſion of the fixt Salt, recovers its due Craſis, and therefore drinking up again its extravaſated Serum, and conſtantly carrying it to the Reins, cauſes a large Evacuation by Urine.

Preſcripts of Diureticks, which have a fixt Salt for their Baſis.

TAke Salt of Tartar, or of Wormwood two Drams, Coral calcin'd to a whiteneſs, a Dram and a half, Nutmegs half a Dram: Make a Powder, the Doſe is from half a Dram to two Scruples.

Take Tincture of Salt of Tartar, from a Dram, to a Dram and a half, Radiſh water Compound, an Ounce and a half: Mingle them, give it in a draught of Poſſet drink which has had the Roots and Seeds of the great Bur-dock boild in it.

Take the Deliquium of Salt of Tartar which (whilſt the Tincture is extracted) floats under, and is impregnated with the Sulphur of the Wine, from two Scruples to a Dram and a half, Whitewine from four Ounces to ſix, Syrup of the five Roots half an Ounce: Mingle them, and make a draught to be repeated twice or thrice a day.

Take Aſhes made of the Prunings of the white Vine half a pound, Nutmegs two Drams, pour to them of White or Rheniſh wine two pounds and a half; let it ſtand a day in a moderate heat, and cloſe cover'd, then keep the ſtraining for uſe: The Doſe is four Ounces twice or thrice a day.

Let Flints be made red hot in the Fire, and be quencht in White wine, or ſtale March Beer: Give of the Liquor from ſix Ounces to eight twice a day.

Take

Take Water of quick Lime, from four Ounces to ſix, Tincture of Salt of Tartar, from a Dram to a Dram and a half: Make a draught to be taken twice or thrice a day.

For the ſame reaſon as fixt Salts, ſometimes alſo volatile Salts are given with good ſucceſs to move Urine in a ſouriſh diſtemper of the Blood, to wit, foraſmuch as its Particles when admitted into the Blood deſtroy the predominancy of the fluid Salt in it; ſo that the Blood recovering its due mixture, and being freed from coagulations and fluxions, drinks up again what Serum is extravaſated, and conveys what is ſuperfluous, to the Reins to be ſent forth by the Ureters. But we may note withal, that Medicines prepar'd of a volatile Salt, having particles ſomewhat fierce in operation and inſtigating, when they correct the Craſis of the Blood, diſpoſe what there is ſuperfluous of Serum to be diſcharg'd, ſometimes by Sweat as much as by Urine. In this order of Diureticks, not only the bare volatile Salt drawn forth of Animals and Minerals ought to be numbred; but likewiſe the integral parts of Animals and Vegetables, ſuch as are the Powders and Extracts of Inſects and Vegetables of a ſmart nature.

Preſcripts of Medicines that have a volatile Salt for their Baſis.

TAke Salt of Amber, Pure Sal Nitre, of each two Drams: make a Powder, the Doſe is from a Scruple to half a Dram, in a fit Vehicle.

Take Flowers of Sal Armoniack, Cryſtal Mineral, of each two Drams: Make a Powder, the Doſe is from a Scruple to half a Dram, in a good ſpoonful of Radiſh water compound. Salt of Urine may be given after the ſame manner.

Take Powder of Bees a Scruple, Lovage-ſeed a Scruple: Make a Powder, give it in a ſpoonful of diſtill'd water.

Take Spirit of Urine, from a Scruple to half a Dram, Radiſh water compound, from an Ounce to an Ounce and a half, Juniper water three Ounces, mingle them, make a draught. Spirit of Tartar may be given after the ſame manner in a double quantity.

Take Millepedes prepar'd two Drams, Flowers of Sal Armoniack half a Dram, Nutmegs powder'd half a Dram, Venice Turpentine what ſuffices: Make Pills, let four be taken twice a day.

Take Powder of Burdock-ſeeds two Drams, Wild Carrot-ſeed a Dram, Salt of Amber a Dram, Oyl of Nutmegs half a Scruple, Balſamum Capivii what ſuffices: Make a Maſs, form it into little Pills; of which let four be taken in the Evening, and as many the next Morning.

Take

Take Roots of Chervil, Stone Parſly, Fennel, Eringo, Cammock or Reſt-harrow, of each an Ounce, Leaves of Saxifrage, Clivers or Gooſe-graſs, of each a handful, Seeds of Gromwel, Hartwort, of each half a handful, Juniper Berrys ſix Drams, boil all in four pounds of fountain water till half be conſum'd; then add Rheniſh Wine a pound, fine Honey two Ounces: Make an Apozem, the Doſe is ſix Ounces twice a day.

Take freſh Millepedes two pounds, Leaves of Clivers, Chervil, Saxifrage and Golden Rod, of each two handfulls, Roots of Horſe Radiſh ſix Ounces, Nutmegs an Ounce, Juniper Berrys, Wild Carrot-ſeeds, of each two Ounces; being ſlic'd and bruis'd, pour to them of Whitewine Poſſet-drink eight pounds, diſtil it in a common Still: Let the whole Liquor be mixt, the Doſe is four Ounces twice or thrice a day.

Take freſh Millepedes waſh'd, from forty to ſixty, Nutmegs half a Scruple; being bruis'd together, put to them diſtill'd Water of Saxifrage three Ounces, wring it forth hard and drink it.

Take Leaves of Chervil, Macedonian Stone Parſly, of each three handfulls, being bruis'd together, pour to them of Whitewine a pound and a half, wring it forth hard and keep it in a Glaſs; the Doſe is three Ounces twice a day.

Prepare a Tincture of Millepides, Bees, Graſhoppers or of Cantharides dry'd with the Tincture of Salt of Tartar; give it from fifteen to twenty or thirty drops in a fit vehicle.

Nitre is a ſort of Salt, but differing from any other Salt, or from the nature of Saline Particles, being neither Acid, fixt or volatile, but holds the mean ſtate as it were betwixt thoſe three. And in truth Nitre is the thing by which all Plants have their vegetation, all Animals live and breath, and every Sublunary Flame or Fire is kindled and maintained.

But as to our preſent purpoſe, it's well enough known that Sal Nitre cools the Blood, and powerfully provokes Urine, though it ſeems ſomewhat ſtrange how this, which is of ſo fiery a nature ſhould ſo quallify the Blood, and run it into Aquoſities to move Urine.

I conceive that Nitre works thoſe effects in a two-fold reſpect, to wit, as it is a Salt, ally'd both to a fixt Salt and a volatile, and as it carries a living Root of Fire in it. As to the firſt, we obſerve that Nitre (ev'n as fixt and volatile Salts) being put into Milk, hinders or takes away its coagulation; ſo likewiſe Blood whilſt warm, being pour'd to this, is preſerv'd from coagulation, and from being diſcolour'd no leſs than if put to thoſe. Wherefore ſince Particles of Nitre inwardly taken preſerve the mixture of the Blood entire, or reſtore it, it follows that they prevent or take away the fuſions or coagulations of the ſame, from which

heats, and a ſuppreſſion of Urine, very often ariſe. So again, Nitre in regard it carries in it a living Root of Fire, when inwardly taken, cools the inflamed Blood, and moves Urine, becauſe (according to what is hinted before) it adds a vigour to the flame of the Blood, which before was troubled and full of fumes, and ſo renders it more clear and pure, and conſequently more mild; ſince therefore the Blood burning clearer by the acceſs of Nitre becomes of a more looſe conſiſtency, the ſerous Particles eaſily get clear of the more groſs, and paſs away in a more plentiful manner.

Preſcripts of Diureticks that have Sal Nitre for their Baſis.

TAke Nitre prepar'd, two Drams, Barley water with Graſs Roots, and Candied Eringo Roots boil'd in it two pounds, Syrup of Violets two Ounces: Mix them, the Doſe is four Ounces twice a day.

Take Sal Prunella two Drams, Sugar-Candy a Dram, make a Powder to be divided into ſix parts: Let one be taken in a convenient Liquor thrice a day.

Take Sal Prunella two Drams, Salt of Amber a Dram: Make a Powder, the Doſe is half a Dram thrice a day.

Take Sal Prunella, Crabs Eyes, Salt of Wormwood, of each two Drams: Mix them, the Doſe is half a Dram thrice a day.

Its alſo well known that *Powders of Shells*, and of *certain Stones*, containing an Alchaliſate, or Petrifying Salt ſometimes promote an evacuation by Urine. For Powders of *Egg-ſhells*, of the *Claws and Eyes of Crabs* have been to ſome a preſent Remedy in great ſuppreſſions of Urine; and if we enquire into their manner and way of working, we ſhall ſoon find that theſe Medicines do not fuſe the Blood, nor ſenſibly precipitate it; wherefore it muſt be ſaid that theſe things in a ſouriſh Dicraſie of the Blood and Humours, ſometimes prove Diuretick, inaſmuch as cloſing with the Acid Salts, they bind them and keep them under; ſo that the Blood being free from fluxions and coagulations, drinks up again the extravaſated Serum, and conveys it to the Reins.

Preſcripts

Preſcripts of Diureticks that have an Alchaliſate Salt for their Baſis.

TAke Powder of Egg-ſhells, from half a Dram to a Dram: Give it in a draught of Whitewine, or of Poſſet drink, or of a Diuretick decoction twice a day.

Take Powder of Crabs Claws, or of Crabs Eyes two Drams, Salt of Amber, Sal Nitre, of each a Dram, Nutmegs half a Dram: Make a Powder, the Doſe is from half a Dram to two Scruples in a fit Vehicle. Or let the ſaid Powder be mixt with as much Venice Turpentine as will ſuffice, and make it into ſmall Pills. The Doſe is three or four Evening and Morning.

Not only Saline, but likewiſe ſome Sulphureous and Spirituous ſubſtances juſtly take place amongſt Diureticks, theſe often producing the like effect. Many ſubſtances of the Larix Tree, as chiefly Turpentine, and things prepar'd from them; the Oyls drawn by diſtillation from Juniper, Nutmegs, Wax, and other Pinguous ſubſtances, taken inwardly, move in many perſons a large Evacuation by Urine, and this carrying a ſmell like Violets. I have known that in ſome Hydropical and Scorbutical Perſons, Brandy and Strong waters; nay, and ſtrong Wine freely drank have caus'd a Purging by Urine. The reaſon of all which is, that when the Blood being weak, or turning ſour, or what for want of fermentation, or through the predominancy of an Acid and Coagulative Salt in it, has not ſo ſprightly and continued a Circulation, that it can contain the ſuperfluous Serum within it ſelf, till it delivers it to the Reins: The aforeſaid Remedies foraſmuch as they preſerve the mixture of the Blood entire, or reſtore it when faultering, conduce to the promoting of that evacuation by Urine.

Take Ivy Berrys, Juniper Berrys, Laurel Berrys freſh gather'd, of each half a pound, wild Carrot-ſeeds four Ounces, Nutmegs two Ounces, all of them being bruis'd together, put to them in a Glaſs Retort of Venice Turpentine one pound, Rectified ſpirit of Wine four pounds, diſtill all in a ſand Furnace, with a moderate heat till it grows dry, carefully avoiding an Epyreuma, and you will have a ſpirit, and a yellow Oyl, both of them egregiouſly Diuretick. The Doſe of the Spirit is from a Dram to two or three Drams, of the Oyl from half a Scruple to a Scruple in a fit Vehicle.

To the remaining fæces in the Retort, pour Tincture of Salt of Tartar one pound; let them digeſt for many days cloſe luted in the ſand Furnace, that a red Tincture may be drawn from it: The Doſe of which is from a Scruple to two Scruples or a Dram in a fit Vehicle.

Take Millepedes prepar'd three Drams, Nutmegs one Dram: being bruis'd, pour to them the pureſt Spirit of Turpentine, and Tincture of Salt of Tartar, of each ſix Ounces, diſtill it with a gentle Bath heat, and you will have a Spirit, Oyl, and deliquium of Salt of Tartar, each of them notably endow'd with a Diuretick force.

CHAP. VI.

Inſtructions and Preſcripts for Curing too much Purging by Urine, and particularly the Diabetes or Piſſing Evil.

IN a Diabetes, as in moſt other affects there are three Primary Therapeutick Indications, *viz.* Curatory, Preſervatory and Vital. The firſt of theſe regarding the Diſeaſe, and attempting to ſtay the too great Effuſion of Urine cannot be accompliſh'd without the ſecond, which aiming at the cauſe of the Diſeaſe, endeavours to preſerve and reſtore the mixture and due Craſis of the Blood: Wherefore as to the Cure of this Diſeaſe, the chief intentions of healing muſt be to keep the Blood from fuſion, and in caſe that happens to take it away.

Firſt the fuſion of the Blood is prevented, ſo its groſs and aqueous parts reciprocally contain each other, and do not readily and abruptly ſever themſelves, which thing is effected by Incraſſatives (commonly ſo called) whoſe viſcous and glutinous Corpuſcles being admitted into the Maſs of Blood, ſtrongly adhere to its Active Particles, and ſo part them from each other, and hinder them from mutually combining betwixt themſelves, or with Saline Particles coming from elſewhere, as might otherwiſe happen through fluxions. In this reſpect, *Rice, Amylum, Mucilaginous Vegetables, alſo Gumms and ſome Roſins* are wont to give relief in this Diſeaſe.

Secondly, To reſtore the Blood after fuſion, thoſe ſorts of Remedies are indicated which diſſolve the concretions of Salts, ſo that all the Elementary Particles in it coming again to be at liberty, recover their former places, and ſo reſtore the Craſis of the Blood to its firſt vigour. Now its well known that this effect is produc'd in coagulated Milk by the addition of a fixt, volatile, or a nitrous Salt to it; alſo by the infuſion of Spirit of Hartſhorn,

of

of Sal Armoniack and the like. The reaſon of which doubtleſs is, that whilſt the Saline-fixt, volatile or nitrous Particles, being in a ſufficient quantity put into the Milk, meet with the Acid or Precipitatory Particles, and are combin'd with them; the other Saline Particles which before were bound, being now freed, and diffus'd through the Maſs of the Liquor, looſen the Sulphureous and Earthy Parts combin'd betwixt themſelves, and diſperſe them every way, ſo that all the Particles being again equally mixt, mutually contain themſelves, and are contain'd; yet becauſe Saline Medicaments are accounted by many to be always Diuretick: We do not give them lightly, or without conſideration for the Cure of a Diabetes, though in this Diſeaſe I have preſcrib'd the Tincture of Antimony with good ſucceſs. And a water of the Solution of quick Lime with the Raſpings of Saſſafras, Aniſeeds, Raiſins and Liquoriſh, according to the vulgar Receipt, is highly commended by ſome.

The Vital Indication is made good in this Diſtemper by a thickning and gently cooling Diet, and by temperate Cordials, and chiefly by appoſite and ſeaſonable Hypnoticks.

A Nobleman in the vigour of his Age, became very prone to an exceſs of Piſſing, and when for many Months he had been us'd at times to undergo this great Flux of Urine, he fell at length into a confirm'd Diabetes as it ſeem'd, and almoſt paſt hope of recovery: For beſides that, in the ſpace of twenty four hours, he voided near a Gallon and a half of clear water, and wonderfully ſweet, as though Honey were mixt in it: He was moreover affected with a cruel Thirſt and a Fever, ſeemingly a Hectick, with a mighty Languor of the Spirits, a fall of ſtrength, and a Conſumption of the whole Body. I then preſcrib'd him the following Remedies, by the uſe of which he ſeem'd in a ſhort time to recover.

Take Cypreſs Tops, eight handfuls, Whites of Eggs beaten two pounds, Cinnamon half an Ounce, being cut ſmall, pour to them of new Milk eight pounds, diſtill it in an ordinary Still, taking care of an Empyreuma. Let him take ſix Ounces thrice a day.

Take Gum Arabick, and Gum Tragacanth, of each ſix Drams, Penids an Ounce: Make a Powder, let him take about a Dram, or a Dram and a half twice a day, with three or four Ounces of the diſtill'd water.

Take Rhubarb powdred fifteen Grains, Cinnamon ſix Grains: Make a Powder, let him take it in the Morning, and renew the Doſe within ſix or ſeven days.

Take Cowſlip water three Ounces, Cinnamon water Cordeated two Drams, Syrup of Meconium half an Ounce: Make a draught to be taken every Evening.

His

His Diet was only Milk, which he took pretty often in a day, ſometimes crude or diluted with the diſtill'd water, or with Barly water; ſowetimes boil'd with White-bread, or with Barly: Growing daily better by the uſe of theſe things, within a Month he ſeem'd to be almoſt Cur'd: As he began to grow a little well, his Urine which was Inſipid, did not much exceed the quantity of Liquids he took, and afterwards turning a little Salt, it became leſs in quantity than what he drank, and ſo by degrees recovering the wonted tone of his Spirits and a good ſtrength, he took to his former Diet.

Nevertheleſs the diſpoſition to this Diſeaſe did not ſo throughly ceaſe, but afterwards being apt frequently to Relapſes upon diſorders in Living, and haply upon changes according to the ſeaſons of the year; he firſt made Water in a greater meaſure than ordinary, which by degrees grew clear and ſweetiſh, a Thirſt and Fever, with a Languor of the Spirits accompanying it: But by the uſe of the ſame Medicines he us'd in a ſhort time to recover again: Not long ſince after a large interval of health, a little before he fell into a Flux of Urine, he found great irregularities and failings in the *Genus Nervoſum*; *viz.* He was ſeiz'd with a dull numbneſs of his Brain, and a Vertigo, and was taken with ſudden Cramps in his Limbs, and felt little Leapings of the Tendons, and various runnings about him, as though it were of a wind creeping here and there. And when by the uſe of fit Remedies, the aforeſaid Symptoms ſeem'd to be Cur'd; the Diabetes after its wounted manner burſt forth afreſh; *viz.* the matter flowing forth in abundance from the Fibres and ſolid parts into the Blood, and thence to the Reins and the Urinary Paſſages.

In this Juncture the ſame Remedies were preſcrib'd again, by the uſe of which, when within a few days he began to grow better, he was ordered to take thrice a day *Water of quick Lime* to five or ſix Ounces: Having continued this Remedy four days, he made water in a moderate quantity well ting'd, and ſomewhat ſalt, and as to other things he ſeem'd well as he was before.

By the ſame method, and chiefly with the Water of quick Lime, I Cur'd another of a Diabetes, who was look'd upon as paſt recovery.

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The Kinds and Preſcripts of Medicines that ſtop Urine flowing in exceſs.

ASTringent Medicines properly ſo call'd, to wit, ſuch as are auſtere, acerb, and ſtiptick, do little or nothing in ſtopping a *Diureſis*; for the vertue of thoſe things has no effect on the Maſs of Blood, nor does it reach to the Reins and Bladder: But the Remedies that chiefly do good in the *Diabetes* are of two kinds, as we have hinted before: *viz.* Firſt, thoſe that hinder the combinations of the Salts, and conſequently the fuſion of the Blood, ſuch as the Incraſſatives before mentioned.

Secondly, Thoſe that diſſolve the Concretions of the Salts, and conſequently reſtore the mixture of the Blood, of which kind are Saline Remedies of a contrary nature, which are apt to cleave to the Acid Salt, and ſo withdraw it from the combinations it has entred into within the Blood, as chiefly Medicines endow'd with a fixt, volatile or alchaliſate Salt. Beſides theſe two Primary kinds of Medicines that reſtrain Urine, there reſts a Secondary kind, to wit, *Hypnoticks*, which putting ſome ſtop to the Animal Æconomy, cauſe the vital function to be perform'd with more calmneſs, and conſequently with leſs fuſion of the Blood, or precipitation of the ſerous and nutricious humours. It remains now to ſet down ſome Select Forms of each kind of theſe Medicines.

I. The firſt Scope of Curing, to wit, by which we endeavour by thickning the Blood to prevent its fuſion, or to take it away, is effected by the Medicines following.

Take Gumm Arabick, and Tragacanth powder'd, of each an Ounce, Sugar Fenids half an Ounce: Make a Powder, divide it into ſixteen parts. Take one part thrice a day, diſſolving it in the diſtill'd water, or in the decoction of the Roots of Comphry in fountain water or Milk.

Take of the Reſumptive Electuary three Ounces, Species Diatragacanthi frigidi an Ounce, Red Coral prepar'd two Drams, Confection of Hyacinth a Dram and a half, Gelly of the caſt Skins of Vipers what will ſuffice: Make an Electuary, of which let the Patient take twice a day the quantity of a Wallnut.

Take white Amber, Maſtick, Olibanum powdred, of each an Ounce, Pulvis Haly two Ounces, Balſam of Tolu half an Ounce: Make a Subtle Powder, the Doſe is half a Dram twice or thrice a day.

Take Roots of great Comphry, and Water Lillies, of each three Ounces, Dates ſlic'd two Ounces, Seeds of Mallows, Cotton-plant, Plantain, Fleawort, of each half an Ounce, Boil them in four pounds of foun-

fountain water till half be conſum'd, to the ſtraining add Syrup of Water Lillies two Ounces: The Doſe is four Ounces thrice a day.

Take of the decoction of Barly with Water Lilly-roots a pound and a half, Sweet Almonds prepar'd an Ounce and a half, Seeds of white Poppies, Purſlain, Lettice, of each half an Ounce: Make an Emulſion according to art, the Doſe is four Ounces thrice a day.

Take Cypreſs Tops ſix handfuls, Clary Leaves four handfuls, Flowers of blind Nettles, Comphry, Water Lillies, of each four handfuls, Roots of Water Lillies and Comphry, of each half a pound, Mace an Ounce, all being ſmall ſlic'd together, pour to them of new Milk eight pounds, diſtil them in an ordinary Still: The Doſe is four Ounces thrice a day, with the Powder or Electuary above written.

II. In the ſecond place, though Saline Medicines of every kind and condition are accounted Diuretick, and every of them in certain caſes, inaſmuch as they fuſe the Blood, and cauſe a copious ſeparation of its Seroſities, are in ſome ſort Diuretick. Nevertheleſs for the reaſon above-mention'd, to wit, for that meeting with the Acid Salt, when it is predominant in the Blood, they prevent and take away its fuſion and diſſolution. I do not doubt but ſometimes they may be given with good ſucceſs to ſtop Fluxes of Urine. And I have heard for certain, that one was Cur'd of a Diabetes by an Infuſion of quick Lime. Now in regard the Saline Medicaments (which we ſuppoſe to take away the predominancy of the Acid Salt, and to fetter it, as it were) contain either a fixt, volatile or Alchaliſate Salt: I ſhall give you ſome Forms of Diureticks, which have each of theſe for their foundation.

1. Firſt then when a fixt Salt by it ſelf, or join'd with Sulphur is requir'd for a Baſis.

Take Tincture of Salt of Tartar, or its Deliquium what ſuffices: Give it thrice a day in a draught of the decoction or diſtilld water before deſcrib'd.

Take Tincture of Antimony, let it be taken after the ſame manner thrice a day: I have found by frequent experience the uſe of this to be very profitable in this Diſeaſe.

Take Tincture of Salt of Coral a Scruple, let it be taken after the ſame manner.

Take of the Infuſion of quick Lime a pound: The Doſe is three or four Ounces thrice a day, giving before a Doſe of the Electuary, or Powder above preſcrib'd.

Take Conſerves of the Flowers of blind Nettles, and of the great Comphry, of each four Ounces, of the reddeſt Crocus of ſteel half an Ounce, Coral calcin'd to a whiteneſs two Drams, Syrup of Comphry what ſuffices. Make an Electuary, the Doſe is two Drams thrice a day.

Take

Take Lapis Specularis calcin'd an Ounce: The Doſe is from half a Dram to a Dram twice or thrice a day. Country People with this Medicine ſucceſsfully Cure their Cattle that piſs bloody water.

Take Coral calcin'd to a whiteneſs and powdred three Drams, Powder of Gumm Arabick and Tragacanth, of each a Dram: Make Powder, divide it into ten parts, let one part be taken thrice a day with a fit Vehicle, to wit, with the decoction or the diſtill'd water.

Take the reddeſt Crocus Martis ſix Drams, Gumm Lac powdred half an Ounce, red Saunders a Dram: Make a Powder, divide it into twenty parts, whereof let one be taken thrice a day.

Take Hartſhorn burnt and powdred half an Ounce, boil it in four pounds of the water of a Smiths forge till half be conſum'd, adding towards the end a Cruſt of Bread, Roots of great Comphry, and water Lillies dry'd, of each an Ounce and a half, Sacchari Perlati two Ounces, let him take four Ounces thrice a day.

2. Medicines containing an Alchaliſate Salt, ſuch as Coral, Pearl, Cuttle-bone, Hartſhorn, Ivory, Powders of Shells and the like, as they are commonly us'd againſt Rheumatick affects, ſo likewiſe for a Diabetes: And inaſmuch as they imbibe the Acid Salt abounding in the Blood, and ſo free the Maſs of Blood from fuſion, we may juſtly expect a benefit from them.

Take red Coral ground to a great ſubtlety, Cuttle-bone, of each half an Ounce, Hartſhorn Philoſophically calcin'd three Drams, Pearl, Ivory, Crabs Eyes, of each a Dram: Mix them, make a Powder, the Doſe is half a Dram thrice a day, with a fit Vehicle.

Take of the ſaid Powder three Ounces, Species Diatragacanth frigid two Ounces, Sugar Candy two Ounces: Make a Powder, and with a ſufficient quantity of the Solution of Gumm Arabick make a Paſte; and let it be form'd into Troches weighing half a Dram, let three or four be taken thrice or oftner in a day.

Take of the ſaid Powder two Ounces, of the Reſumptive Electuary four Ounces, Conſerve of the Flowers of water Lillies three Ounces, Syrup of the ſame what ſuffices: Make an Electuary, let him take the quantity of a Cheſnut thrice a day, drinking after it a draught of the Apozeme, or of the diſtill'd water above preſcrib'd.

3. For the ſame reaſon as Medicines endued with a fixt and Alchaliſate Salt ſeem proper in Curing the Diabetes; for the ſame reaſon do ſuch as have a volatile Salt. For theſe as well as thoſe lay hold on, and draw of the Acid Salt, (by which the Blood is fus'd and diſſolv'd into Seroſities) ſo that its Liquor recovers its due Craſis.

Take the Solar Tincture prepar'd (as I readily do it) with Sal Armoniack an Ounce; The Doſe is twenty Drops thrice a day. The Spirits of Blood, Soot and Hartſhorn, may alſo be try'd in this Diſeaſe.

Take Salt of Amber a Dram, the reddeſt Crocus Martis two Drams: Mix them, divide it into twelve parts, the Doſe is one part thrice a day.

III. As to the third kind of Remedies in the Diabetes, to wit, *Hypnoticks*, which by putting a ſtay to the Animal Spirits, retard the courſe of the Blood, and ſo hinder in ſome meaſure its efferveſcency and fuſion. I uſe to preſcribe to ſome perſons *Diaſcordium* to be taken every Evening, and when that does not do, I give ſometimes every Night, and ſometimes every other Night *Liquid Laudanum Cydoniated* or *Tartariz'd*, and that with good ſucceſs.

Take the decoction of Barly, with the dry'd Roots of Comphry ſix Ounces, white Poppy-ſeeds two Drams, ſweet Almonds prepar'd in number ſix: Make an Emulſion according to art, let it be taken every Night going to ſleep.

Take of the Magiſtral diſtill'd water above preſcrib'd four Ounces, Solution of Tragacanth two Drams, Diaſcordium from half an Ounce to ſix Drams. Give it going to ſleep.

Take Conſerve of the flowers of water Lillies two Drams, Laudanum Tartariz'd or Cydoniated a Scruple, Tincture of Saffron ſix Grains: Make a Bolus to be taken going to ſleep.

CHAP. VII.

Inſtructions concerning Sweating and Diaphoreticks, or Medicines cauſing Sweat, with Preſcripts of them.

FOr a ready and plentiful eruption of Sweat, theſe three things are requir'd. Firſt that the Blood boi'ling more than its wont, circulates with a more rapid motion. Secondly, That its Latex abounds with many watry Particles, and thoſe looſe, that is, apt to be ſeparated from the reſt of the Liquor, and to be reſolv'd into Vapours; for if there be a deficiency of Serum, or if it be not eaſily ſeparable from the Blood through its too great compactneſs, or incraſſation by reaſon of Fæculencies ſtrongly mixt in it; ſcarce any ſweat at all will follow, though the intenſe heat of a burning Fever preſſes for it, and moſt powerful Diaphoreticks

ticks are given at the ſame time. Thirdly, The Pores of the whole Body muſt be ſet wide open for a free paſſage of the Sweat.

Therefore Sweating Medicines to be taken inwardly muſt be ſuch as make the Blood boil more than ordinarily, and conſequently cauſe it to evaporate: Alſo ſuch as ſomewhat looſen and fuſe its often too compact and incraſſated Maſs, that its Seroſities may more readily depart from it and be ſeparated, and they muſt be ſuch as at the ſame time diſpoſe them ſo ſeparated, rather to paſs forth by Sweat, than by Urine or Seige. As to the third thing requir'd, to wit, the opening of the Pores, this is done in a manner wholly by outward Adminiſtrations.

Now becauſe the ſame Saline preparations which are given to procure Sweat, are often given to move Urine, and ſometimes alſo for Cordials; we muſt ſhew by what preparation, and other requiſites, Sweating is to be promoted alone without the other intents.

And we obſerve that Sudorificks inwardly taken, ſeldom or never work of their own accord, as Emeticks, Catharticks, or Diureticks; but always need ſome Governance to actuate the Medicine, and to determine it to that Energy: Wherefore a Diaphoretick being given, the Patient muſt preſently be ſo ordered that the Pores of his Body may be open'd, and the beat of his Heart very much heighten'd. For theſe ends, either let him be kept in a Bed, Bath, or Hot-houſe, or let him exerciſe his Body with ſome quick or laborious motion; and that theſe things may ſucceed the better in promoting Sweat; when it is in our power, let us make choice of a fit time and ſubject for it, *viz.* when the Blood enjoying a laudable, or not very evil Craſis, both ſufficiently abounds with a Serous humour, and has not its Particles in too great a confuſion or perturbation, but is in a diſpoſition readily to be looſen'd, and to ſeparate it ſelf, and run into parts. For in a Bilous temperament, in a thin and dry conſtitution; and in the midſt of a burning Fever, when all things are in a trouble and undigeſted: Diaphoreticks commonly prove of no effect or do hurt. Moreover when Diaphoreticks are judg'd proper, we muſt not give all ſorts of them indifferently, but peculiar Medicines muſt be choſen according to the various diſpoſition of the Blood, and the different predominancies of the Element in it, ſometimes of this, ſometimes of that, and according to the ſtates of the Salts.

The Kinds and Preſcripts of Diaphoretick Medicines.

SUdorifick Medicines being manifold, and of divers kinds, and being wont in a various reſpect to be rang'd in order, and reduc'd to Claſſes. In the firſt place I have thought fit here to diſtinguiſh them, and ſet them down, both as to their form and manner of Compoſition, and as to the matter out of which they are made. Their moſt uſual forms are 1. a Powder. 2. Chymical Liquors. 3. A Potion. 4. A Bolus. 5. A Diet.

The matter of each of theſe are either the integral parts of the whole mixt Body, or certain Elementary parts of ſome mixt, reſolv'd by Chymiſtry, and thoſe are either ſimple, *viz.* either Spirituous or Saline: The latter of which alſo are either volatile or fixt, Acid or nitrous. Or laſtly the Sudorifick Particles ſo divided and ſeparated by Chymiſtry, are Elementary parts compounded betwixt themſelves, *viz.* Spirituo-Saline, and Salino-Sulphureous. As we run through each of theſe Species in order, we ſhall adapt to each matter the more Select forms of Preſcripts.

Diaphoreticks which have the integral parts of a mixt for their foundation, in which alſo a ſmart or volatile Salt is predominant, in this reſpect often conduce to provoke Sweat, that their Particles being admitted into the Blood, and being immiſcible with it, and not to be ſubdued, exagitate its Maſs, greatly divide it, and draw it aſunder as it were into moſt Minute parts; ſo that at length the texture of the Blood being very much looſen'd, and ſet a boiling, the ſuperfluous Seroſites, Recrements, and taints of the Blood are caſt forth together with the Particles of the Medicine, which are expell'd by reaſon of their Heterogeneity. Thoſe that are of this rank are uſually given in the form of a Powder, Bolus, Potion and Diet, according to the following forms of Preſcripts.

Take Roots of Contrayerva, Serpentaria Virginiana, Butter-burr, of each a Dram, Cochinele, Saffron, of each half a Dram: Make a Powder, the Doſe is half a Dram, with a fit Vehicle.

Take Powder of Vipers a Dram, give it in ſome convenient Liquor.

Take Powder of Toads prepar'd, from half a Dram to a Dram.

When Diaphoreticks ought to predominate in Sal Alchali alone, or mixt with the former.

Take

Take Oriental Bezoar, from a Scruple to half a Dram, give it in a ſpoonful of diſtill'd water, or ſome other Vehicle.

Take Powder of Crabs Claws Compound, from a Scruple to half a Dram, give it after the ſame manner.

The Bezoartick Powder is made after this manner.

Take Powder of the Roots of Contrayerva, of Crabs Claws ſimple, of each two Ounces, Pearl, both ſorts of Coral, white Amber, Crabs Eyes, Hartſhorn, Cryſtal prepar'd. of each an Ounce, Occidental Bezoar, Lemnian Earth, of each half an Ounce, Ceruſe of Antimony two Ounces, Cochenele half an Ounce, Ambergreece a Dram and a half, Musk half a Dram: Make a ſubtle Powder, and let it be form'd into little round Balls with the Gelly of the Skins of Vipers, the Doſe is from a Scruple to a Dram.

Take of this Bezoartick Powder a Scruple, Powder of Toads prepar'd ſix Grains: Make a Powder, give it in a ſpoonful of Treacle water.

2. Bolus's which have for their Baſis the integral parts of ſome mixt, made in the form of an Electuary, Extract, or Conſerve.

Take of Mithridate, from half a Dram to a Dram, of the Bezoartick Powder, from a Scruple to half a Dram, Syrup of the Juice of Citrons what will ſuffice; make a Bolus. Inſtead of Mithridate you may put Treacle, or Diaſcordium, or Confectio Liberantis, de Hyacintho: So likewiſe Bezoar powdred, or the Roots of Contrayerva, and the Powders of the like things may ſupply the place of the Bezoartick Powder.

Take of the Extract of Treacle, from half a Dram to a Dram, of the Bezoartick Powder a Scruple: Make a Bolus.

Take of the Extract of Carduus half a Dram, Bezoartick Powder a Scruple. Salt of Wormwood fifteen Grains, with a ſufficient quantity of the Syrup of the Juice of Citrons: Make a Bolus.

3. Potions which have for their Baſis common decoctions of Vegetables, or Infuſions and Tinctures.

Take Roots of Butter-burr an Ounce, Seeds of the ſame two Drams, Eringo Roots Condited ſix Drams, Carduus Seeds two Drams, boil all in a pound of fountain water, till half be conſum'd: In the cleer ſtraining diſſolve of Mithridate half a Dram or two Scruples: Let it be taken warm in Bed.

After the like manner the *Leaves of Carduus*, the *Flowers of Marigolds* or *Cammomile* may be boild in a ſufficient quantity of Poſſet-drink, of which ſix or eight Ounces may be given warm either alone, or with ſome Powder, Electuary, or other Diaphoretick added to it.

4. Diaphoretick Infuſions and Tinctures of divers kinds may be prepar'd by extracting the vertues of ſimple Vegetables, and Confections with Wine, Vinegar, or diſtill'd water, which afterwards

wards being ſtrain'd and clarified by ſetling are often given with ſucceſs: To this place ought to be referr'd the Bezoartick waters, Wines and Vinegars prepar'd by Infuſion, the forms of which are every where to be found amongſt Authors. Moreover Tinctures of Vegetables which are of very great effect in a ſmall Doſe, are made after this manner.

Take Roots of Contrayerva a pound, being bruis'd and put into a Matraſs, pour to them Spirit of Wine three Pounds: Let them digeſt to draw forth a Tincture; then ſtrain it, and draw it off in Balneo to the conſiſtency of Honey: Keep the Spirit firſt drawn off apart from the reſt, pour it again to what ſtays behind, and draw the Tincture again: The Doſe of which is from half a Dram to a Dram, in a fit Vehicle.

5. Diets, whoſe foundations are decoctions of Woods deſign'd for the Cure of the French Pox, and other Cronick Affects deeply rooted in the Blood and humours.

For indeed a very intenſe and frequent Sweating, *viz.* continued for a long time, day by day is requir'd for the Cure of ſome Diſeaſes, to wit, that not only the Impurities and Corruptions of the Viſcera and humours, may be purg'd forth, but ev'n the Morbifick Taints, deeply Imprinted in them may be wholly aboliſh'd, or as it were eradicated: To effect this it will not be enough to give a Sudorifick Powder or Bolus now and then at times; but an entire Diet muſt be ordered for this purpoſe. Wherefore let all the drink the Perſon takes be a Diaphoretick Decoction, after a Doſe of which taken each Morning, let a copious Sweat be promoted, by adding to it the heat of a Bath, or of a Hot-houſe; and after that by this means the Pores of the Skin are open'd, and Nature is inclin'd to Sweat, let the Recrements of the Blood and Nervous Juice for that whole day evaporate by perſpiration, which muſt be ſtill maintained by the uſe of the ſaid Drink: By this method not only the *French Pox* is moſt ſafely, and for the moſt part, moſt certainly Cur'd, but alſo ſome other moſt difficult Diſeaſes are ſometimes eaſily overcome.

Take the Raſpings of Guaiacum four Ounces, Sarſaparilla ſix Ounces, China two Ounces, all the Saunders, of each an Ounce, Shavings of Ivory and Hartſhorn, of each half an Ounce, Antimony powdred and tied in a rag ſix Ounces: Let them Infuſe and Boil according to Art in ſixteen pounds of fountain water, till half be conſum'd, and ſtrain it; to the remaining Magma, add the like quantity of water, let them infuſe and boil till a third part be conſum'd, adding to it Raiſins a pound, Licorice an Ounce: Let the ſtraining be kept for a common drink.

In caſe of a Bilous Temperament, and a ſharp and hot Blood, leave out the Guaiacum, and augment the quantities of the China and Sarſa,

Diapho-

Diaphoreticks which conſiſt of the Integral parts of the whole mixt, and are eaſie to be gotten for poor people, may be preſcrib'd according to the following forms.

In Malignant Fevers. *Take Conſerve of Wood Sorrel a Dram, Mithridate two Scruples and a half, mix them: Let it be taken, drinking after it a draught of Poſſet-drink, that has the Leaves of Carduus, Scordium, or of Camomil Flowers, or Marigolds boil'd in it.*

Take Powder of the Roots of Virginia Serpentary, from half a Dram to a Dram: Give it with a fit Vehicle, or give Powder of the Root of Butter-burr a Dram after the ſame manner.

In ordinary caſes give the *Decoction of Gromwel, of the Roots of Butter-burr, or Virginia Serpentary, or of the Roots and Seeds of the great Burr-dock:* In the French Pox a *Decoction of Soap-wort, or of the Raſpings of Box*, and the like may ſupply the place of the *Decoction of Woods*, which are of greater price.

2. Sweating Medicines prepar'd from the Elementary parts of a mixt, have for their Baſis either a Spirit, or a Salt, ſometimes ſimple, ſometimes combin'd with another Salt, or with Sulphur. Let Spirituous things be preſcrib'd according to the following forms.

1. Let the *Spirit of Treacle Camphorated be given, from half a Dram to a Dram, or a Dram and a half in a fit Vehicle.* After the ſame manner many other Spirits diſtill'd from the Juices of Vegetables, maturated by fermentation, and appropriated to certain Diſtempers, may be given to provoke Sweat, when it is Indicated: Of which kind are the *Spirits of Black-Cherries, of the Berries of Elder, Ivy and Juniper, with many others; the Spirits of Hartſkorn, Soot, Blood and the like*, ought rather to be numbred in the rank of *Salts*.

2. Diaphoreticks, whoſe Baſis are Spirits, with other Elementary Particles combin'd, may be preſcrib'd after this manner. *Take of the ſimple mixture a Dram, give it in a convenient Vehicle.* To this place alſo may be referr'd thoſe things that conſiſt *of a Spirit, fixt Salt, or a Sulphur combin'd*: Of which kind are the *Tincture of Salt of Tartar and Antimony: The Doſe of which are from a Scruple to two Scruples in ſome other Liquor.* Moreover *diſtill'd waters* in which the Spirituous Particles are diluted with watry ones, are often given to provoke Sweat with good ſucceſs.

Take Roots of Butter-burr and Valerian, of each two Ounces, of Zedoary, Contrayerva, Virginia Serpentary, of each an Ounce and a half, Flowers of Butter-burr four handfuls, Saffron two Drams, being ſlic'd and bruis'd, pour to them four pounds of Sherry Sack, diſtil it according to Art: Let the whole Liquor be mixt, the Doſe is from two Ounces and a half to three Ounces. Or take Roots of Angelica, and Maſter-wort, of each four Ounces, of Zedoary, Ele-Campane, Swallow-

low-wort, Gentian, the leſſer Galingal, of each an Ounce, Tops of Carduus, Rue, Angelica, of each three handfuls, the middle Bark of the Aſh ſix Ounces; being ſlic'd and bruis'd, add Mithridate, Venice Treacle, of each two Ounces: Mix them, and pour to them of Canary ſix pounds, diſtill'd Vinegar two pounds, diſtil it according to Art: The Doſe is three Ounces.

The Doſes of the aforeſaid Waters may be actuated by the addition of Chymical Liquors or Salts. Theſe ſorts of Medicines endow'd with a Vinous Spirit are proper chiefly, and in a manner only for old people, and ſuch as are of a cold temperament, and are ſubject to the Palſy and Dropſy: But in a hot conſtitution, and when there is a fervent heat of the Bowels, and a Feveriſh boiling of the Blood, by ſcorching thoſe, and enflaming this too much, they uſually rather do hurt than good.

Diaphoreticks, whoſe Baſis is Saline, as they are of a various nature, *viz.* according as the Salt is volatile, fixt, Acid or Nitrous, ſo they are of a different uſe and operation, and hence in certain caſes theſe, and in others thoſe and thoſe are moſt proper to be given, as we have before obſerv'd in Diureticks.

1. Fixt and volatile Salt is moſt propper for thoſe whoſe Blood very much abounds with a ſerous humour. Moreover, when at any time the Juice which Irrigates the Viſcera, and the *Genus Nervoſum* begins to turn ſharp, as it uſually happens in Hydropical and Cacochymical perſons, and in ſuch as are ſubject to Convulſive Diſtempers, thoſe Medicines are moſt effectually given to cauſe a Sweat; becauſe that whilſt they meet the Acido-Saline Particles of the humours, and are combin'd with them, they looſen the Texture of the Blood, and at the ſame ſtrongly agitate its Maſs by reaſon of their Heterogenous mixture: Hence for a ready ſeparation and driving forth of the Seroſities through the Pores of the Skin, thoſe things are preſcrib'd in the form of a Powder, Bolus and Liquor.

Take Flowers of Sal Armoniack half a Scruple, Criſtal Mineral fifteen Grains, Bezoartick Powder a Scruple, mix them: Let it be given in a ſpoonful of Sudorifick water.

Take Salt of Tartar a Scruple, Ceruſe of Antimony twenty five Grains: Make a Powder, let it be given after the ſame manner.

Take Powder of Bezoartick Mineral, from a Scruple to half a Dram, Gaſcoins Powder a Scruple: Make a Powder, let it be given in like manner.

Take Ceruſe of Antimony, from a Scruple to half a Dram, Flowers of Sal Armoniack half a Scruple: Make a Powder.

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2. Thoſe things may be given in the form of a Bolus, by mixing the aforeſaid Doſes with *Treacle, Mithridate or Diaſcordium, or with the extract of Carduus, Gentian, or the like.*

Take Bezoartick Mineral a Scruple, Flowers of Sal Armoniack ſix Grains, Mithridate half a Dram: Make a Bolus.

Take Salt of Hartſhorn eight Grains, Bezoartick Powder fifteen Grains, Extractum Theriacale a Scruple: Make a Bolus, or three Pills.

If a Liquid Form be more proper, *Take Spirit of Hartſhorn, or of Soot, or of Sal Armoniack, from fifteen Grains to twenty, Sudorifick water, from an Ounce to three Ounces: Make a draught, let it be taken with governance.*

Take Flowers of Sal Armoniack half a Scruple, Salt of Tartar fifteen Grains, Sudorifick water three Ounces: Mix them, make a draught.

3. Diaphoreticks, which have a Nitrous Salt for their Baſis, are wont to give relief generally in the ſame caſes, as thoſe above, made of a fixt and a volatile Salt; becauſe they deſtroy the predominancy of the Acid Salt, and diſpoſe the mixture of the Blood after ſuch a manner, that as it boils, its Serum and Recrements are readily ſeparated and diſcharged from it.

Take Criſtal Mineral three Drams, Salt of Hartſhorn, or of Soot, or of Vipers a Dram: Mix them; the Doſe is from a Scruple to half a Dram in a fit Vehicle.

Take Sal Prunella two Drams, Bezoartick Mineral, or Ceruſe of Antimony a Dram: Make a Powder, the Doſe is from two Scruples to a Dram.

4. Diaphoreticks, whoſe ground is an Acid Salt, have a peculiar efficacy againſt the predominancy of a fixt Salt, and Sulphur, *viz.* if at any time the Maſs of Blood by reaſon of Salino-fixt Particles combin'd with Sulphureous or Terrene Particles in it, comes to be too much lock'd up and cloſe bound, that it does not eaſily let go its Seroſities to be expell'd by Sweat (as it ſometimes happens in continual Fevers, and in Scorbutick affects) the Acid Salt, after the Medicine is given, meeting the fixt Salt in the Body, and laying faſt hold on it, makes void its undue combinations, and ſo opens the boiling Blood, and diſpoſes it for a Sweat.

Take Spirit of Tartar, from half a Dram to a Dram, Sudorifick water three Ounces, Flowers of Sal Armoniack half a Scruple: Mix them.

Take of the ſimple mixture, from half a Dram to two Scruples, Give it in a ſpoonful of Treacle water, or Bezoartick water.

Take Bezoartick Vinegar, from half an Ounce to an Ounce, Carduus water two Ounces, Plague water ſix Drams: Mix them, make a draught.

Take Spirit of Guaiacum a Dram, Sudorifick water three Ounces: Mix them, make a draught.

Some things meerly, or for the greateſt part Sulphureous are commonly plac'd in the rank of Diaphoreticks: As for inſtance ſome Natural, and other Artificial Balſams, alſo Chymical Oyls, as chiefly of Guaiacum, Box, Camphire, Hartſhorn and Soot: So likewiſe the Reſinous Extracts of Ponderous Woods, with many others, which though by themſelves they do little for raiſing Sweat; yet being join'd with the other Saline Medicines, I do not think them altogether unprofitable, becauſe in a cold and Over-phlegmatick Conſtitution, Sulphureo-Saline Medicines Rarify the Blood which is then become too watry, and diſpoſe it to a free evaporation, no leſs than ſuch as are Spirituous.

Take of Opobalſamum, from Six Drops to twelve, Water of Baum, or of Ground Ivy three Ounces, Sudorifick water half an Ounce: Let it be taken every Morning to provoke Sweat for many days together. It is proper for Phthiſical Perſons, and ſuch as have Ulcers in the Reins.

And ſo, but in a greater Doſe, may be given the *Balſam of Peru*; *alſo the Tincture of the Balſam of Tolu, and likewiſe compounded Balſams gotten by diſtillation.*

Take Roſin of Guaiacum powdred two Drams, Chymical Oyl of the ſame a Scruple, Bezoartick Mineral, Gumm Guaiacum, of each a Dram and a half, Balſam of Peru what ſuffices: Make a Maſs for Pills, the Doſe is from half a Dram to two Scruples, drinking after it a Doſe of the Sudorifick water, or of the Decoction of Woods.

CHAP. VIII.

Inſtructions and Preſcripts for Curing an Exceſſive, or Depraved Sweating.

FRequent and immoderate Sweating, is ſometimes the Symptom of ſome other Diſeaſe then affecting the Perſon; for in the Phthiſick and Scurvy this is a common thing: The reaſon of it is, that the Blood being tainted with ſome filthy infection, or become of an ill habit, is not able duly to concoct and aſſimilate the nutritive Juice ſtill paſſing into its Maſs, and therefore

fore always degenerating, and coming now and then to be full charg'd by the addition of other Excrements, it ſeparates them, and expells them by Sweat.

The Cure of this Sweating depends wholly on the Cure of the Diſeaſe whoſe Symptom it is: In the mean time thoſe copious Night-ſweats happening in thoſe Diſeaſes, plainly ſhew that the Perſons Diet ought to be altogether of light food; *viz.* Milk, Gruel, Cream of Barly and the like, whoſe gentle and mild Particles the Blood can bear, and not of Fleſh, or ſtrong ſubſtances.

Sometimes an exceſſive Sweating is the effect of ſome foregoing Diſeaſe which is brought to an end, and this is ſo common a thing after long Agues, that ſcarce any recover of them; but this Indiſpoſition ſtill ſticks upon them more or leſs. I knew a young man, who as he grew well of a Quartan Ague, which had held him ten Months, and began to loſe its fits, daily melted into ſuch profuſe Sweats, that he was fain to change his Shift and Sheets thrice a Night, being as wet as though they had been dipt in water: This Evacuation continuing ſo for many Weeks, his Fleſh ſo fell away, and his ſtrength was ſo exhauſted, that he look'd like a Skeleton. This Perſon when he had us'd many Medicines a long time without much benefit; at length by drinking Aſſes Milk Mornings and Evenings, and his other Diet being ordered of Cows Milk, he grew very well in a ſhort time.

The chief cauſe of frequent and copious Sweats ſeems to conſiſt in the ill habit and weakneſs of the Blood, in that it is apt continually to be fus'd and precipitated into Seroſities: The Pores of the Body in the mean time being open and free for an Evacuation by Sweat. Now the Blood is ſo apt to fuſions and flowings for the moſt part from a predominancy of a Fluid or Acid Salt in it, and ſometimes the Nervous Juice growing ſharp, empties its Acid ſuperfluities into the Blood, and ſo precipitates its Maſs into Seroſities.

This exceſſive Sweating does not only ariſe from the vitiated Craſis and Fermentation of the Blood, but ſometimes from its depraved Accenſion, and through an exceſs of Sulphur in it, as ſometimes through a deficiency of it.

In order to the Cure of this Over-Sweating, the Therapeutick intentions muſt be chiefly theſe three. Firſt, To take away or correct the ill habit or weakneſs of the humours. Secondly, gently to cloſe the Pores of the Skin which are too open. Thirdly, To derive the Serum of the Blood, and the watry ſuperfluities to the Reins.

1. The firſt of theſe is perform'd by thoſe Remedies which deſtroy the predominancy of the Acid Salt in the Blood, or Nervous Juice; and which promote the Exaltation of the Sulphur (if haply it grows weak) for which ends Anti-ſcorbuticks, Chalybeats: Alſo Medicines endow'd with a Volatile, Nitrous or Alchaliſate Salt moſt commonly prove effectual. I ſhall ſet down certain forms of each of theſe.

Take Conſerve of the Flowers of Cichory and Fumitory, of each two Ounces, Powder of Ivory, Hartſhorn, Coral prepar'd, of each a Dram, Pearl half a Dram, Species of Diarrhodon Abbatis a Dram, Lignum Aloes, Saunders both red and yellow, of each half a Dram, Sal Prunella four Scruples, with a ſufficient quantity of Syrup of Fumitory, make an Electuary: Give the quantity of a Wallnut in the Evening, and the next Morning, drinking after it either of the following Julap or diſtill'd water, three Ounces.

Take the Waters of Fumitory and Wallnuts ſimple, of each ſix Ounces, the Waters of Snails and Earth-worms, of each an Ounce, Sugar ſix Drams: Mix them, make a Julap.

Take tops of Firr, Tamariſk, Cypres, of each four handfuls, of Myrtle two handfuls, Leaves of Watercreſſes, Brooklimes, Agrimony, St. Johnswort, Harts-Tongue Fluellen or Speedwel, of each three handfuls, the outward Coats of twelve Oranges: Being ſlic'd and bruis'd, pour to them of Brumſwick Beer eight pounds, diſtill it in common Organs: Let the whole Liquor be mixt, and ſweeten it at pleaſure, the Doſe three Ounces twice a day.

Take Leaves of Dandelion, Watercreſſes, Plantain, Brooklimes, of each three handfuls, being bruis'd, pour to them of the diſtill'd water above written a pound, wring it forth hard: The Doſe is from three to four Ounces in the Morning at Nine of the Clock, and at Five in the Afternoon.

According to this method, I uſe to preſcribe in a failing of ſtrength and Night-ſweats after long Agues, and if theſe remedies do no good, we muſt come to Chalybeates.

Take Syrup of Steel ſix Ounces; let a ſpoonful be taken in the Morning, and at five in the Afternoon, with three Ounces of the Water above preſcrib'd.

Take Powder of Ivory, of Coral prepar'd, of each two Drams, Crocus Martis, Salt of Steel, of each a Dram and a half: Make a Powder, the Doſe is half a Dram twice a day, with three Ounces of the ſame diſtill'd water.

Take Tincture of Salt of Tartar an Ounce: The Doſe is from twenty to thirty Drops twice a day with the diſtill'd water. After the ſame manner may be given the Tincture of Coral, and Tinctures prepar'd out of Gums and Balſams. Moreover in theſe caſes the Spirits of Hartſhorn, Urine and Soot are often given with ſucceſs.

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The ſecond intention for the Cure of exceſſive Sweating, conſiſting in a due ſtate of the Pores, is perform'd in a manner only by outward Adminiſtrations: For which end let the whole Body be anointed with Oyl of Date-kernels, with an Oyntment of Orange Flowers and the like, and let Linnen done over a little with the ſame be worn; ſometimes Bathing in cold Water, or in a River, ſometimes change of Air may do well.

It ſeems here proper to ſpeak a little of a certain troubleſome Diſtemper, relating to Sweating, or at leaſt to an exceſſive perſpiration. I often obſerve that ſome Perſons have their Bodies ſo diſpoſed, that if upon any occaſion the leaſt Breath of Wind or Air comes upon them, their Spirits are preſently in a mighty trouble, all their Powers are in a Conſternation, and their whole Body is diſcompos'd.

This extream tenderneſs in ſome Perſons more than in others to take cold, or to be offended with it, happens either through the fault of the Animal Spirits, or of the Blood, or of the Pores of the Body, to wit, of one of them, or of more of them together.

1. Firſt, The Animal Spirits are ſometimes in fault, becauſe being very weak, they are not able to endure any thing harſh, or rough outwardly preſſing upon them; but preſently upon the appulſe of the bare Air, are put to flights and diſtractions. And ſometimes this Indiſpoſition happens through their fault, for that being degenerated, and become of an eager, reſtleſs and uneaſie diſpoſition, they are put into diſorder upon every ſuch preſſure of Air. Wherefore thoſe who by reaſon of the Spirits ſo diſpos'd become Hypochondriacal, being alſo ſubject to the Affect before mention'd, on every little occaſion are troubled with Cold.

2. The Blood diſpoſes to a habit of depraved Perſpiration in a two-fold manner, *viz.* both in reſpect of its temperament, and of its mixture: As to this latter oftentimes the Texture of the Blood is ſo looſe and open, that upon every light accident, and eſpecially upon the appulſe of a cold moiſt Air, it's preſently ſtirr'd to fluxions and precipitations of Seroſities; inſomuch that Perſons who have ſuch Blood, dare not ſtep forth of doors, nay ſcarce look forth. Again, the Maſs of Blood being often hot in its temper, and very full of vapours, Breaths forth Effluvia's very ſharp and penetrative, by which the Pores of the Skin being too much looſned and laid wide open, the Spirits and the Vital Flame are expos'd to the injuries of the naked Air, and the Winds more than they ought.

3. The ill conſtitution of the Pores, gotten either by ſickneſs, or other ways, or being natural from our Birth, very much inclines to that habit of depraved Sweating. For in regard thoſe paſſages being too wide, do always in a manner gape, the Blood

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and Spirits in the whole Body, or in certain parts of it are not ſufficiently guarded againſt the encounter of the outward Air.

The Intentions for Curing this Diſtemper are chiefly theſe three, *viz.* firſt to help the weakneſſes, or dejections, or depauperations of the Blood and Spirits. Secondly, To take away their Dyſcraſies if they have any. Thirdly, To procure a due Confirmation of the Pores.

The chief ſtreſs of this buſineſs conſiſts in the firſt intention, which regards the ſtrengthning of the Animal Spirits, and the inlargement of the whole ſenſitive Soul; for unleſs the Patients reſolve to take courage, ſo as to attempt to go abroad, to ſet forth their ſtrength to their utmoſt, and accuſtome nature daily to inure it ſelf to hardſhip, all medicines prove uſeleſs: Wherefore a plentiful and cheerful way of living are no leſs neceſſary than Phyſick, that thereby the ſtock of Animal Spirits may be daily renew'd and increas'd, and ſo confirm'd in ſtrength by greater practices now and then inſiſted on; for which ends ſtrong Wines with good Diſhes of meat are very proper. Moreover all Studies and Cares, (with which the Soul is depreſt) being laid aſide, let the time be paſt in idleneſs and recreations, or in moderate exerciſes. As by ſuch a kind of living duly ordered, the Animal Spirits are greatly refreſh'd, ſo it repairs the decay and depauperations of the Blood.

For the ſame ends alſo the following Medicines may be given with good effect.

Take Spirit of Amber Armoniacated what ſuffices; let fifteen or twenty drops be taken in the Evening, and the next Morning in a ſpoonful of the following diſtill'd water, drinking after it nine ſpoonfuls of the ſame.

Take Leaves of Sage, Roſemary, Time, Savory, Marjoram, Coſtmary, of each four handfuls, Roots of Angelica and Maſter-wort, of each ſix Ounces, of Zedoary, the leſſer Galingal, Calamus Aromaticus, Florence Orris, of each an Ounce and a half, Cubebs an Ounce and a half, Nutmegs, Cloves, Cinnamon, of each an Ounce, the outward Coats of twelve Oranges, and of ſix Limmons; being ſlic'd and bruis'd, pour to them of Whitewine and Canary of each four pounds: Diſtil it in common Organs, let the whole liquor be mixt and ſweetn'd with Sugar perlated. In the diſtilling hang in the head of the Alembick a Nodulus, with a Scruple of Amber-greece in it, and half a Scruple of Musk.

Take Tincture of Antimony, or of the Balſam of Tolu an Ounce; let fifteen or twenty drops be taken in the Morning at Nine a Clock, and at Five in the Afternoon, in a ſpoonful of the water before preſcrib'd, drinking after it three Ounces of the ſame; or rather in the Morning drink after it a Diſh of Tea, or Coffee, or Chocholate prepar'd of a Decoction of Sage.

A little before Dinner drink a Glaſs of Sherry, Sack.

When theſe things have been uſed ſome time, and you think good to intermit them, take the following things in their place.

Inſtead of the Spirit, take a Doſe of the following Electuary in the Evening, and early in the Morning with the diſtill'd water, or Viper Wine.

Take of wet preſerv'd Citron Pills, an Ounce and a half, Mirobalans Condited an Ounce, Nutmegs, Ginger Candied, of each half an Ounce, Confection of Hyacinth, Alchermes, of each three Drams, Pearl prepar'd, red Coral prepar'd, of each a Dram and a half, with the Syrup of the Juice of Kermes make an Electuary.

Let the ordinary drink be a Phyſick Ale made after the following manner, *viz.* into a veſſel of four Gallons put the following bag.

Take an old Cock half boil'd and maſh'd, Leaves of Sage and Harts-Tongue dry'd, of each two handfuls, ſix Dates ſlic'd, Raſpings of Saſſafras two Ounces; being ſlic'd and bruis'd, mix them, put them in a little bag, and hang it in a Veſſel after it has done working.

The ſecond intention which undertakes to correct the Dyſcraſies, or depraved diſpoſitions of the Blood and Spirits, is perform'd by the ſame Remedies, as in the Hypochondriacal diſtemper and Melancholy: Wherefore the preſcripts which I formerly gave for the Cure of thoſe affects may ſerve here.

As to the third intention, which for keeping the Pores in a due State, ordains a meet way of Government as to cloathing, the Air, the Fire, *&c.* there is little left for a Phyſician to do; for commonly every Patient will be his own Councellour as to theſe things: There is only one kind of advice which they are apt to receive, and is wont to do them good, *viz.* that they change their habitation, by which often the Mind is alſo chang'd; for thoſe that are never ſo much addicted to keep themſelves pen'd up in a Chamber, or in Bed, when they travel into foreign Countries, where they breath a warmer and more ſerene Air: It's almoſt incredible in how ſhort a time they recover.

So much concerning this depraved Perſpiration which has not been touch'd by others.

There remains yet a third kind of this immoderate Sweating which is not as the firſt, the Symptom or effect of another preſent or paſt Diſeaſe; but it ſelf firſt beginning, is either a Diſeaſe of it ſelf, or the parent of ſome Morbid affect: To the firſt ſort chiefly belongs the Peſtilential Sweat, which was heretofore call'd *Sudor Anglicus*: But I ſhall not now go about to preſcribe Medicines for a Diſeaſe which I hope will never return.

CHAP.

CHAP. IX.

Inſtructions concerning Cordial Medicines, and Alexipharmicks, or Preſervatives againſt Venome, with Preſcripts of them.

IF the thing be duly conſidered, the notion of Cordial Medicines was not well introduc'd, but is a meer vulgar errour; for ſince it is not the Heart which is the Subject of Life, but chiefly, and in a manner only the Blood, and in regard the Soul it ſelf (on whoſe exiſtence and act in the Body Life depends) is founded partly in the Blood, and partly in the united ſtock of Animal Spirits, it plainly ſollows that Medicines which preſerve Life entire, or reſtore it when in danger, do rather and more immediately regard theſe parts of the Soul, to wit, the Blood, and Animal Spirits than the Heart, which is a meer Muſcle, ſerving for the Circulation of the Blood, and as often as it ſlackens in performing this duty, or gives it off: This does not happen through its own fault, but through that of the Blood and Animal Spirits, by which it is actuated.

Therefore to know the ways and manners of working of thoſe Medicines which are call'd Cordials, we muſt conſider theſe two things, *viz.* Firſt, how many, and particularly what ways the Blood being ill diſpos'd, and often endangered, either as to its accenſion, or mixture, requires Phyſical helps, which may preſerve or correct it. Secondly after what manner by reaſon of a defect or delinquency in the Animal Oeconomy the Heart is hindred, or perverted from its due motion, ſo that Medicines are Indicated, which encreaſe the ſtores of the Spirits, and better compoſe them. [To be well inſtructed concerning theſe things, read Dr. *Willis* at large.]

The

The Kinds and Preſcripts of Cordials.

According to what is ſaid before, we diſtinguiſh Cordial Medicines (commonly ſo call'd) into two kinds; ſome of them chiefly and more immediately affect the Blood, others the Animal Spirits. In the firſt rank of thoſe that are deſign'd for regulating the accenſion of the Blood, we place thoſe which by encreaſing, or exalting its Sulphureous Particles cauſe its over-cold and ſlow moving Liquor to boil more, to be more freely kindled, and to burn with more life; of which kind are good Wines, Compound Strong-waters diſtill'd, the Spirit and Tincture of Saffron, Quercitans Elixir of Life: the Tincture of Salt of Tartar, of Steel, and other things that chiefly abound with Spirit, and have a plenty of Sulphur; of which ſometimes theſe, ſometimes thoſe may be taken as every patient liſts. When by reaſon of the Bloods being not kindled, and conſequently of its too great crowding and ſtagnation, as it were, within the Præcordia, a languiſhing and failing of the Spirits, with a great oppreſſion of the Heart happens, then Aqua Mirabilis, the waters of Cinnamon, Cloves, Wormwood Compound, alſo of the Rines of Oranges diſtill'd with Wine are proper; to which ſometimes a Doſe of ſome Spirit, Elixir or Tincture may be added.

But here great caution is needful, that a perſon do not indulge himſelf too much to theſe kind of Cordials, for many by often ſipping of them, get an ill habit, continuing their daily uſe, and encreaſing the Doſe, which at length proves fatal to them; for the Liver chiefly, and other entrails are ſo dry'd and ſcorch'd thereby, that the ſtock of Blood being diminiſh'd, and its Craſis perverted, an unhealthy Cacochymia follows, or an abbreviation of Life.

In the ſecond Rank of Cordials, we put thoſe Medicines which ſomewhat appeaſe the too great boiling of the Blood, and put a little ſtop to, and allay its immoderate deflagration, of this kind are diſtill'd Waters, Acids, and Nitrous things.

Take the waters of Wood-ſorrel, of whole Citrons, of Straw-berrys, of each four Ounces, Syrup of the Juice of Citrons an Ounce, Pearl Powdred a Dram: Make a Julape; the Doſe is two Ounces three or four times a day.

Take the waters of Pippins, or Garden Apples, of Rasberrys, of each four Ounces, Syrup of Violets an Ounce, Spirit of Vitriol twelve Drops: Make a Julape.

Take fountain water a Pound and a half, Juice of Limmons two Ounces, Sugar an Ounce and a half: Make a drink, of which let three Ounces be taken at pleaſure.

Take Gráſs Roots three Ounces, Candied Eringos ſix Ounces, two Apples ſlic'd (or Corinths two Ounces) Shavings of Ivory, and of Hartshorn, of each two Drams, Leaves of Wood-ſorrel a handful, boil them in three pounds of fountain water to two pounds; to the clear ſtraining, add of Sal Prunella a Dram and a half, Syrup of Violets an Ounce and a half, Make an Apozem, the Doſe is three or four Ounces thrice a day.

Take Conſerve of red Roſes vitriolated four Ounces, fountain water two pounds, diſſolve it cloſe cover'd and warm, then ſtrain it; the Doſe is three Ounces at pleaſure.

Take Conſerve of Barberrys, Rob of Rasberrys, of each an Ounce and a half, Pearl prepar'd half a Dram, Confection of Hyacinth a Dram, Syrup of the Juice of Citrons what ſuffices: Make a Confection; the Doſe is half a Dram thrice a day.

The third rank of Cordials furniſhes thoſe ſorts of Medicines, which being deſtinated againſt the exorbitancies of the boiling Blood, looſen and open its cloſe texture, for the ſeparation and diſcharge of its droſſy ſuperfluities. Theſe being chiefly, and in a manner only of a ſaline nature, are alſo of divers kinds according to the manifold ſtate of the ſaline Particles of which they conſiſt; but for the moſt part their Baſis is either a Volatile, Alchaliſate, Acid, Fixt, or Nitrous Salt, we ſhall ſet down certain forms of each of theſe.

In the Firſt place Cordials endow'd with a volatile Salt, are wont to be given with good effect according to the following preſcripts, both in Feavers, in reſpect of the Blood, and alſo in ſwoonings, and ſudden faintings in reſpect of the Animal Spirits.

Take Spirit of Hartſhorn, from fifteen Grains to twenty, Treacle water two Drams, give it with a ſpoon, drinking after it a draught of ſome appropriated Liquor. After the ſame manner may be given the Spirits of Blood, of Mans Scull, of Soot, of Sal Armoniack Compound.

Take Salt of Vipers a Dram, Sal Prunella two Drams, Powder of Crabs Claws Compound a Dram and a half: Mix them, make a Powder; the Doſe is from half a Dram to two Scruples, in a ſpoonful of Cordial Julape, drinking after it a little draught of the ſame.

Take Flowers of Sal Armoniack half a Scruple, Bezoartick Mineral a Scruple: Make a Powder, give it in a ſpoonful of ſome proper Liquor.

Secondly,

Secondly, Thoſe are chiefly call'd by the name of Cordials by the Vulgar, whoſe Baſis is an Alchaliſate, or Petrifying Salt, as particularly Oriental Bezoar, Pearl, Coral, and other Powders of Shells and Stones.

Take Gaſcoins Powder, or Powder of Crabs Claws Compound, from a Scruple to half a Dram; give it in a ſpoonful of Cordial Julape, drinking after it two Ounces of the ſame.

Take Oriental Bezoar, from ſix Grains to twenty; give it after the ſame manner.

Take Powders of Crabs Claws, and Crabs Eyes of each a Dram, Pearl, both ſorts of Coral prepar'd, of each four Scruples, both ſorts of Bezoar half a Dram, the beſt Bole-Armoniack, Aurum Diaphoreticum, of each two Scruples, Bezoartick Mineral a Dram: Mix them, make a Cordial Powder; the Doſe is from a Scruple to two Scruples, or a Dram, with a fit Vehicle.

In Perſons ſeiz'd with a Pluriſie, the following things are accounted the moſt proper Cordials, for as much as by deſtroying the predominancy of the acid Salt, they take away, or prevent the Coagulations and Extravaſatings of the Blood.

Take the Powder of a Wild Bores Tusk, from half a Dram to a Dram, Criſtal Mineral a Scruple, Powder of red Poppy Flowers half a Scruple: Make a Powder to be taken in any Liquor. After the ſame manner may be given the Powders of Crabs Eyes, and of the Jaw-bone of the Pike-fiſh.

To this place belong alſo preparations of Nitre, which are often given with good effect in Fevers, according to the following Forms.

Take Criſtal Mineral a Scruple, Volatile Salt of Hartſhorn, from three Grains to ſix, mix them: Make a Powder, give it in a ſpoonful of Cordial Julape.

Take Criſtal Mineral, Antimony Diaphoretick, of each a Scruple, Bezoartick Powder half a Scruple: Make a Powder, give it after the ſame manner.

Medicines whoſe Baſis is a fluid, or acid Salt, are preſcrib'd in Fevers after the following Forms, to looſen the Texture of the Blood.

Take Spirit of Vitriol, from four Drops to ſix, Carduus water three Ounces, Treacle water two Drams, Syrup of the Juice of Citrons three Drams, Pearl half a Scruple: Make a draught to be taken twice or thrice a day. Spirit of Salt, or of Nitre may be taken after the ſame manner: For the ſame the drink Cherbet, called alſo the Divine drink of Palmarius are proper.

Take Powder of Hartſhorn Calcin'd, or of Antimony Diaphoretick three Drams, Spirit of Vitriol, or of Salt a Dram; bray them toge-

ther in a Glaſs Mortar, and let them dry: The Doſe is from a Scruple to half a Dram, in a ſpoonful of Cordial Julape.

Fixt or lixivial Salts of Herbs often enter the Compoſitions of Alexipharmicks: Moreover, Medicines which have theſe for their Baſis, as they are accounted very famous Febrifuges, ſo they ought to be numbred amongſt Cordials; for inſtance we propoſe that known Medicine.

Take Salt of Wormwood a Scruple, Carduus water three Ounces, Spirit of Vitriol, or Oyl of Sulphur a Scruple, Syrup of Violets three Drams: Make a draught to be taken three or four hours before the Fit.

Take the waters of whole Citrons, and of Wood Sorrel, of each half a pound, Salt of Tartar a Dram and a half, Juice of Limmons two Drams, Sugar half an Ounce, mix them, make a Julape; the uſe of it is in Anomalous Fevers, which though always burning, have daily returns of ſharp fits: The Doſe is three Ounces twice a day.

The laſt rank of Cordials, and truly in ſome reſpect the chiefeſt, is of Alexipharmicks, becauſe theſe are more vital than the reſt. But Alexipharmicks being either for preſervation, or for Curing: In the firſt place, we ſhall ſet down Select Medicines to be given to perſons, whilſt yet in a ſtate of health, againſt the Infection of the Plague, or any Malignity whatſoever; omitting in the mean time what is uſually ordered concerning the alteration and rectifying of the Ambient Air: And then in the ſecond place we ſhall give you Select Forms of Preſcripts to be uſed after the Contagion is taken.

1. *Antidotes for Preſervation.*

TAke Conſerve of the Leaves of Rue four Ounces, Mithridate, and Confectio liberantis, of each an Ounce, Confection of Hyacinth two Drams, Salt of Wormwood two Drams and a half, Pulvis pannonici rubri half an Ounce, Bezoartick Vinegar what ſuffices: Make an Electuary, the Doſe is the quantity of a Cheſnut thrice a day.

Take Powder of the Roots of Virginia Serpentary, Contrayerva, Zedoary, Species liberantis, of each two Drams, Camphire two Scruples, Sugar diſſolv'd in Bezoartick Vinegar, and boil'd to a conſiſtency for Tablets ſix Ounces: Make Tablets according to art, each weighing half a Dram; let one or two be eaten often in a day.

Take Roots of Virginia Serpentary three Ounces, boil them in three pounds of fountain water till half be conſum'd, to the ſtraining add of the beſt Honey two Ounces, Venice Treacle an Ounce, diſſolve it warm and cloſe cover'd, and ſtrain it: The Doſe is two or three ſpoonfuls three or four times a day.

Take

Take Flowers of Sulphur four Ounces, melt them in a Crucible, then put into it by ſpoonfuls one after another, Salt of Wormwood four Ounces, ſtirring them together 'till the whole Maſs grows red: then add the Powders of Aloes, Myrrh, Olibanum, of each a Dram, Saffron half a Dram; ſtir them again for a quarter of an hour, till they are incorporated; the Maſs being cool'd, and put on a glaſs plate; let it ſtand till it diſſolves into an Oyl, like a moſt beautiful Ruby: The Doſe is from ten drops to twenty in an Ounce and a half, or two Ounces of the Bezoartick water twice a day.

Or pour to the ſaid Powder ſome ſpirit of Wine rectified on the Roots of Contrayerva and Virginia Serpentary, till it cover them three fingers over; draw forth a Tincture: The Doſe is from twenty drops to thirty in a fit Vehicle.

Or, Take of the ſame Powder half an Ounce, pour to it of the beſt Canary two pounds, let it diſſolve cloſe cover'd, and warm: The Doſe is a ſpoonful twice or thrice a day.

After the Contagion is receiv'd, and the Craſis of the Blood is vitiated, and begins to corrupt, the ſame Medicines are ſtill proper to be taken, but in a greater Doſe, and oftner. Moreover the Vinegars, and fixt Salts of Herbs, are very often added with good ſucceſs to Alexipharmicks, becauſe by them the Coagulations of the Blood are reſolv'd, and then all Heterogeneous Particles evaporating, and the other being brought into a due mixture, its liquor at length recovers its former ſtate, and keeps it. There being innumerable Medicines in the Books of Phyſicians for this end; I ſhall here only ſet down a few.

Antidotes for Curing.

TAke of the Bezoartick water two Ounces and a half, Bezoartick Vinegar half an Ounce, Venice Treacle a Dram, mix them, by ſhaking them in a Glaſs: Make a draught, let the perſon take it, and ſweat upon it.

Take Gaſcoins Powder, Roots of Contrayerva, and Virginia Serpentary, of each from a Scruple to twenty five Grains: Make a Powder, give it in a ſpoonful of Treacle water, drink after it a little draught of the ſame, or of a Cordial Julape.

Take Powder of Toads prepar'd, Powder of Crabs Claws Compound, of each half a Dram: Make a Powder, give it after the ſame manner.

Take Bezoartick Mineral half a Dram, Venice Treacle a Dram, Camphire ſix Grains, Bezoartick Vinegar what ſuffices: Make a Bolus to be taken after the ſame manner.

Take

Take the waters of Wood Sorrel and Dragon-wort, of each four Ounces, Water of Scordium Compound two Ounces, Treacle water and Bezoartick water of each an Ounce, Powder of Pearl a Dram, Syrup of Clove-Gillyflowers (or of the Juice of Citrons) two Ounces, Spirit of Vitriol twelve drops: Make a Julape; the Dose is three Ounces often in a day, sometimes by it self, sometimes with other Medicines.

CHAP. X.

Of the Passions of the Heart, and their Remedies.

AFter Cordial Medicines, vulgarly, though improperly, so call'd, it now follows for us to treat of the Passion of the Heart, in which the Heart is really ill affected, and therefore requires true Cordial Medicines: Under that name two affects, somewhat differing betwixt themselves are commonly denoted, to wit, The trembling of the Heart, and its panting: In both affects the motion or beat of the Heart seems to be disorderly, and in a manner Convulsive; but the irregularity of the first consists in the frequency of its Vibrations, and of the other in their vehemency.

As to the Cure of the panting of the Heart, since its Causes are various and manifold, its Cure also must be various; for what some affirm, that those sorts of Remedies vulgarly call'd Cordials, which are reputed to revive the Heart, and to relieve it when ill affected, are proper in any of all these Cases, it is contrary both to reason and common experience.

We say then that the palpitation, or panting of the Heart, proceeds either from the fault of the Blood, or of the Arteries belonging to the Heart: If it happens through the fault of the Blood, the chief intent of Curing must be to raise the Blood to a better Crasis, it being then become too watery and unmeet for accension and fermenting, and to exalt or encrease its active principles which are then depress'd or diminish'd; for which end spirituous Medicines, also saline Medicines of all kinds, Sulphureous and especially Chalybeates conduce: And to this place may be referr'd those things which are wont to be prescribed in the *Pica* or longing Disease, in the *Leucophlegmatia*, and in the cold Scurvy.

Take

Take Conſerve of Sea Wormwood, the outward yellow Coats of Oranges and Limmons, of each two Ounces, Powder of Winters Barke two Drams, Species of Diacurcuma a Dram, Steel prepar'd with Sulphur three Drams, Salt of Wormwood a Dram and a half, with a ſufficient quantity of Syrup of Citron Pills: Make an Electuary, the Doſe is the quantity of a Nutmeg in the Morning, and at five in the Afternoon, drinking after it of the following Julape three Ounces, and walking upon it.

Take water of the Leaves of Wake Robin a pound, of Pennyroyal and Hyſſop, of each four Ounces, Sugar an Ounce: Mix them, make a Julape.

Take of the Tincture of Antimony an Ounce; the Doſe is from twenty to five and twenty drops twice a day, with the ſaid Julape. Moreover, amongſt theſe we may place the Tincture of Steel, and its Syrup, alſo Elixir proprietatis, with many others.

Secondly, The panting of the Heart, which is more frequent, and much more violent, happens through ſome fault in the Arteries belonging to the Heart, which fault is either an Obſtruction, or a Convulſive affect.

The firſt default for the moſt part is continual, and often incurable, but eſpecially if it ariſes from Conſumptive Lungs, or becauſe the Roots of the Arteries are half ſtop'd, or compreſs'd, by reaſon of ſome *Tuberculum*, or bony Excreſcency in them: And in this caſe all that can be done, is to give ſome eaſe now and then by *Hypnoticks*.

Moreover, it is not improbable that the Arteries ſometimes are almoſt fill'd up with Polypous Concretions engendred in them, and ſometimes within the Cavities of the Heart it ſelf, and that thereby the free paſſage of the whole current of Blood is hindred; but as it is difficult to be ſatisfied when this is ſo, ſo it is as rare to find a Cure for it. When there is a ſuſpicion of it, Saline Medicines ſeem to be moſt proper, and of thoſe we muſt give ſuch as have a Volatile, or Acid Salt; but we muſt not give them together, but for a time thoſe (which failing of ſucceſs) try the others.

Take Spirit of Sal Armoniack Compound, viz. *diſtill'd with Millepedes, or with other Anti-Aſthmaticks three Drams, the Doſe is from fifteen drops to twenty thrice a day, with the Julape, or ſome proper diſtill'd water: After the ſame manner you may try the Spirits of Hartſhorn, Soot, Blood, and of an old Skull.*

Take Spirit of Sea Salt, or of Vitriol diſtill'd, and often Cohobated with the Spirit of Wine, impregnated with Pneumonick Herbs three Drams; the Doſe is from fifteen drops to twenty after the ſame manner; for theſe purpoſes the Spirits of Tartar, Guaiacum, and of Box are often us'd.

The

The panting of the Heart is very often a Convulsive affect, and wont to be produc'd from the like Cause, and manner of affecting, as other Hypochondriack and Asthmatick affects; and its Cure also ought to be attempted by Antispasmodick Remedies; but a choice of them must be made with some difference, according as the Disease happens in a hot or cold temperament.

In respect of the former, the following Medicines may be prescrib'd.

Take Spiritus succini Armoniaci three Ounces; the Dose is from fifteen Drops to twenty twice a day, with the Julape, or some proper distill'd water. After the same manner may be given interchangeably the Tincture of Tartar, of Steel, or of Antimony.

Of the trembling of the Heart, and its Cure.

THe trembling of the Heart is an effect distinct from its panting or Palpitation, and of a different nature from it; for in that its carneous and moving Fibres seem affected by themselves, nor does the Morbifick Cause, as in the other affect seem to lie in the Blood, or in the Arteries of the Heart.

The trembling of the Heart may be well describ'd to be a Spasmodick Convulsion, or rather a trepidation of its flesh, by which the moving Fibres hastily, and only half contracted cause most swift turns of the Systoles and Diastoles, but broken, and as it were at halfs; so that the Blood is brought into, and carried forth of the *Sinus*'s of the Heart, only in very small Portions.

As to the method of Cure to be us'd in the trembling of the Heart, since this affect is meerly Convulsive; therefore they are not Cordial Remedies, but rather Cephalicks, and Nervous Medicines that are Indicated; which nevertheless according to the temperament and constitution of the Patient, must be either more hot or moderate, or, now of this, now of that nature. To comprehend all in a few words, since there are three sorts of Mecines, that are wont to be mighty successful in this Distemper, *viz.* testaceous Medicines, Chalybeates, and such as are endow'd with a volatile Salt: I shall here briefly set down certain forms of each of these and their use. Therefore in the first place a provision being made for the whole by evacuatives, and a choice being made of that sort of Medicine which promises best, you may prescribe as follows.

Take

Take Coral prepar'd, Pearl, of each two Drams, both Bezoars, of each half a Dram, white Amber two Scruples, Amber-greece a Scruple: Make a Powder, the Doſe is half a Dram twice or thrice a day, with a diſtill'd water, or ſome proper Julape.

Take Powder of Crabs Claws Compound two Drams, Powder of Male Peony Roots, and of Mans Scull prepar'd, of each a Dram, Flowers of Male Peony, of Lillies of the Valley, of each half a Dram: Make a Powder to be taken after the ſame manner.

Take Ivory, red Coral powdered, of each three Drams, Species Diambræ a Dram, double refin'd Sugar, diſſolv'd in a ſufficient quantity of water of Navews, and boil'd to a conſiſtency for Tablets ſeven Ounces: Make Tablets according to Art, weighing half a Dram; let one or two be eaten often in a day, as the perſon pleaſes.

Take Conſerve of the Flowers of Lillies of the Valley ſix Ounces, Powders of Coral prepar'd, Pearl, Ivory, Crabs Eyes, of each a Dram and a half, Vitriol of Mars a Dram, Syrup of Coral what ſuffices: Make an Electuary; the Doſe is from a Dram to two Drams twice a day, drinking after it a draught of the following Julape.

Take the water of Navews, and of whole Citrons, of each ſix Ounces, of Orange Rines diſtill'd with Wine two Ounces, Sugar half an Ounce: Make a Julape.

Take of our Syrup of Steel ſix Ounces, the Doſe is a ſpoonful in the Morning, and at five in the Afternoon, with two Ounces of the Julape before written, leaving out the Sugar, or with diſtill'd water.

Take Powder of Ivory, and of Coral; of each two Drams and a half, Species Diambræ a Dram, Salt of Steel two Drams, Sugar eight Ounces, Amber-greece diſſolv'd half a Scruple: Make Tablets weighing half a Dram, the Doſe is three or four Drams twice a day.

Take freſh Strawberies eight pounds, the outward Coats of twelve Oranges, freſh Filings of Iron half a pound, being bruis'd together, pour to them eight pounds of Wine; let them ferment in a Pot cloſe cover'd for twenty four hours, then diſtill it in common Organs.

Take Spirit of Hartſhorn, or of Blood, or the like, three Drams: The Doſe is twenty drops twice a day, with a fit Vehicle.

Take Flowers of Sal Armoniack, Coral prepar'd, of each two Drams: The Doſe is a Scruple twice a day.

Take Cryſtal Mineral two Drams, Salt of Amber a Dram, Salt of Hartſhorn a Scruple: Mix them, the Doſe is from fifteen Grains to twenty twice a day, with the diſtill'd water.

Of the intermitting Pulſe, and its Cure.

AMong the Paſſions of the Heart, the intermitting Pulſe may juſtly be numbred, becauſe in this affect, or at leaſt in ſome kind of it the Heart it ſelf labours, though in ſomewhat a different manner than in its panting, or trembling; for in theſe it is ill diſpos'd, and irregular as to its motion, but in that, as to its reſt, this being ſometimes twice longer than it uſes to be in its ordinary courſe.

This intermitting Pulſe, or over-long Ceſſation of Motion in the Heart does not proceed from the mixture or Craſis of the Blood, but only from the irregular diſpenſation of the Animal Spirits, from the Cerebellum into the Nerves that paſs to the Heart, and thence into its Tendons, which irregularity happens, becauſe thoſe Nerves are ſomewhat obſtructed.

Although this Affect being very often without preſent hurt or danger, does not require an over-haſty Cure; yet for preſervation ſake, leſt ſome great Diſeaſes follow it, Remedies and a method of Cure ought to be uſed; at leaſt for the whole remainder of the Perſons Life, let him keep to a Diet well ordered in all reſpects.

Moreover, let ſome gentle Courſe of Phyſick be preſcrib'd him to be conſtantly obſerv'd Spring and Fall; *viz.* That all the Seminal Roots of Diſeaſes founded in the Brain, or apt to be there engendred, may be taken away, as much as may be; for this end we here direct you to the Prophylactick method, with the Medicines preſcrib'd by us elſewhere, againſt the Fits of the Apoplexy.

CHAP.

CHAP. XI.

Inſtructions concerning Opiats, or Medicines that cauſe Sleep, with their good and ill Effects; together with Preſcripts of them.

OPiats exert their Force not by raiſing vapours to the Head, nor by opening the Pores of the Brain, for any vapours or other Soporiferous matter to be admitted into it, but only by deſtroying ſome of the Animal Spirits, ſo that the reſidue being in a conſternation, or forc'd inward, or at leaſt called back from their wonted Emanation into the nervous parts, quit their office, or in ſome meaſure remit of it.

The Narcotick force of Opiats conſiſts in this, that as the Animal Spirits are moſt ſubtile Corpuſcles, compos'd of Spirit and a volatile Salt united together, and exalted to a very high pitch; ſo Opiats on the contrary conſiſt of a fetid Sulphur, that is, of a Sulphur, together combin'd with a fixt Salt, and an Earthy matter, and carried up to a moſt high degree in like manner: Which ſort of Concrets are well known to be ſo contrary to the ſubtile Texture of the Animal Spirits, that ſometimes they put them to flights, or ſubvert them at a diſtance by meer *Effluvia's*, which are very hardly, or indeed not at all perceivable by the ſmell.

Opiats given in a ſmall quantity chiefly and in a manner only regard thoſe Spirits to which the particular charge of natural and ordinary ſleep is committed, the reſt being either untouch'd, or little letted by them: Wherefore after a Doſe of Laudanum is taken, both the inward and outward ſenſes are bound, but the Pulſe, Reſpiration, alſo the functions of Concoction and Separation are continued after their uſual manner, and after ſome time the Spirits of the firſt employ return to their wonted Poſt.

But if an Opiat be ſtronger than it ought, it extends its Force farther into the Province of the Animal government, ſo that an over-great Doſe of it being taken, the Appetite for the moſt part is dull'd, Reſpiration is much ſtreightn'd, and rendred not only difficult, but likewiſe uneven or interrupted, and ſometimes alſo the motion of the Heart is ſo far debilitated, that the Pulſe preſently grows weaker, with a cold Sweat, a deadneſs, and an Eclipſe as it were, of all the faculties, ſo that a perpetual ſleep ſometimes follows this Medicine.

The good Effects of Opiats.

FIrſt then, Opiats are moſt properly and neceſſarily Indicated, in caſe of *want of ſleep*, for then being ſeaſonably and duly Adminiſtred, they give a refreſhing repoſe.

Secondly, In *Delirous affects* Opiats are given with good effect, (though ſometimes they rather do hurt than good, as we ſhall ſhew hereafter) becauſe the Spirits being then mov'd with too much eagerneſs within the Brain, and as it were ſtruck with a rage, and paſſing their wonted bounds, the Opiats repreſs them, and make them quietly retreat into their former ſtations.

Thirdly, Opium is accounted of moſt excellent uſe for appeaſing all ſorts of *Pains*: For ſince Pain cannot be caus'd or continued, but a great plenty of Spirits muſt always abound in the part affected, in caſe the Nerves are ſo clos'd, that the paſſing of the Spirits to the place griev'd be hindred, or much diminiſh'd, (which Opium effects) it follows of neceſſity that the Pain muſt ceaſe: For the Particles of this Medicine beſetting the extream parts of the Brain, do not only quell the forlorn Spirits in its outmoſt part, but likewiſe ſtrongly ſuppreſs them in their Original ſource within the Brain, and in the midſt of the Cerebellum, and conſequently hinder their Emanations from thence into the *Genus Nervoſum*; ſo that during the Energy of the Opium, they are ſent more ſparingly and thinly into the *Precordia* and *Viſcera*, nay, and into all other parts. Hence the Pulſe and Breathing remit of their vehemency and frequency; many times alſo all the Members and Limbs are ſeiz'd with a Languor and Laſſitude. Moreover, hence the *Viſcera* before irritated into Convulſions, either tending to Excretions, as by Vomit, or ſeige, or cauſing Pain, as in the Colick or Stone, depoſe their diſorders.

Again, the good effect of Narcoticks is notoriouſly known in the Cure of the *Scorbutick Colick*: In *Pains of the Gout* they alſo do excellently well, and ſo in the *Pain of the Stone in the Bladder*, which Diſeaſe, when it cruelly torments Old Men, and cannot be Cur'd by Cutting, admits no eaſe from any other Remedy, but from Narcoticks: Wherefore in this caſe I have advis'd ſome to the conſtant and daily uſe of Laudanum and Diacodium, which they have put in practice, to the great comfort of their life, receiving no hurt thereby, though ſometimes augmenting its Doſe, they have taken to a great quantity.

Fourthly, Opiats are ſeaſonably given, if at any time the Pulſe

or Breathing are more quick or vehement than they ought; for when in Feavers the Motion of the Heart and Lungs being made more intenſe, give a moſt rapid Circulation to the Blood, ſo that it is greatly perverted, both as to its *Accenſion*, and as to its *Craſis*, and is not able to ſeparate its droſſy Excrements, which are ſo throughly mixt with it: After a Narcotick is given, preſently the *Impetus* of thoſe parts is ſomewhat broken, ſo that the Blood coming then to a gentle and moderate Circulation, diffuſes a leſs intenſe heat, and being looſen'd in its Texture, it purges its *Serum* and impurities by Sweat and Urine.

Reſpiration not only as it is urgent, but moreover as the ſame is interrupted, Convulſive, or otherwiſe variouſly irregular, often requires a Narcotick Medicine: In a violent or very frequent Coughing always troubling us, this uſes to give relief before all other Remedies. Again, in fits of the *Aſthma*, when the Organs of Reſpiration are ſo laborioufly exercis'd, that the Perſon affected ſeems to be brought to the Agony of Death, a Doſe of ſome proper Opiat, makes all things preſently ſerene and calm. Moreover in horrible Vomiting, in exceſſive or violent Purging, this uſually gives great eaſe. Fluxes can ſcarce be Cur'd without Opium, not that this Medicine fixes the boiling and raging Juices and Humours, but ſtops the Excretory Convulſions of the Fibres, and that partly within the Cavities of the *Viſcera* themſelves, it ſtupifying by its meer contact the Spirits there Implanted, and partly by ſuppreſſing the Spirits within the Cerebellum, which continually flow to thoſe parts, whereby the others being deſtitute of ſupplys from them readily remit of their Convulſive rage.

Fifthly, In *Catarrhs and Defluxions* of all kinds, we often fly to Opiats, as to our laſt refuge, they powerfully ſtay excretions of Blood, and moderate and reſtrain ſerous Evacuations, when at any time they are exceſſive, and tend to a Colliquation. They repreſs the Immoderate Ebullition of the Blood in a burning Feaver, and leſſen its exceſſive Accenſion. Briefly they moſt readily appeaſe all turbulent commotions in our Body from what cauſe ſoever they ariſe, and let the Blood be never ſo much diſturb'd, they moſt commonly reduce it to a calm and quiet ſtate.

Opiats, where they agree, moſt commonly fuſe the Blood, and after the manner of Alexipharmicks powerfully provoke Sweat, and move Urine, as Dr. *Willis* gives us here an Inſtance of a Perſon troubled with the Dropſy, and ſeverely tormented with Night-pains caus'd by the Pox, who by the conſtant uſe of Laudanum, fell at length into great Sweats and Evacuations of Urine every Night, and ſo was Cured.

A Lady, who for many years was ſubject at times to cruel pains of the Colick, as often as ſhe fell ill of that Diſeaſe, and found

found the pains grow intolerable, could get no eaſe from any Remedy but from Opium: Wherefore ſhe took a Doſe of this each Night, till the Morbifick matter being conſum'd by degrees, ſhe became at length free from all grief and pain.

Of the evil Effects of Opium, with cautions concerning its Uſe.

WE have found, by ſad experience in many, the Uſe of Opium to be ſometime hurtful and deſtructive; for that ſome preſently after taking it, have fallen into a perpetual ſleep, and others by taking a Doſe of it too great, or unſeaſonably, have either ſhortn'd their Lives, or by injuring their principal faculties, have rendered it afterwards uneaſie and burthenſome. I have known ſome, who upon taking a Pill of Laudanum, have fallen preſently into ſo profound a ſleep, that they could never be rais'd from it, they liv'd indeed for three or four days, and as to their Pulſe, Reſpiration, and Heat were pretty well, but could never be brought again to ſenſe, and waking, by any Remedies or tortures. I have obſerv'd others, who after taking Opium, have ſlept but moderately, nay ſometimes little or ſcarce at all; but as to their Pulſe, Reſpiration, and Heat preſently grew worſe; ſo that incontinently after the Medicine, they began to have a failing of ſtrength, and then, growing ſhort and thick Breath'd, to decay more and more, nor could their vigour be renew'd by any Cordials, but fainting by degrees they died. I have elſewhere related a ſtory of a robuſt man kill'd by Opium, who had no ſleep at all after it, till his laſt and mortal ſleep, *viz.* Death it ſelf following it; this Man preſently after he had taken the Medicine, complained of a great heavineſs upon his Stomack, and of Cold, then he was taken with a great Languor, and a Conſternation of all his Spirits, with a coldneſs of his extream parts, and within ſome hours complaining that his Eyes grew dim, and at length that he was quite blind, he died.

I ſhall now relate what evils from the improper, or unſeaſonable uſe of Opium, ſometimes happen in the Head, what in the Breſt, and what in the Belly.

As to the firſt, it's well known that the principal functions of the Soul, *viz.* the Memory, the Reaſon, and the Acuteneſs of the underſtanding are very often extreamly injur'd by Narcoticks. A frequent uſe of them weakens the Memory in many perſons; I knew a perſon, who by taking a great Doſe of it in a Feaver, wholly

wholly loſt the uſe of that faculty, and after ſome weeks, when the uſe of it began to return, he remembred only things done within a peculiar tract of time, and nothing of thoſe that were done before or after. I have known ſome that have grown dull and ſtupid by this Medicine, and others that have grown mad. And it's obſerv'd, that thoſe Turks that eat much Opium, though they ſeem to be well, and not injur'd by it, yet they are rendred more cold, and their functions become worſe; they appear always as though they were drunk and beſotted, and are affected with a Coma, or a continual inclination to ſleep, being ſtupid and unconſtant, ſometimes affirming a thing, and ſometimes denying it, ſo that they are unfit to deal or converſe with men.

Secondly, We find that Opiats are ſometimes hurtful to the Precordia and Breſt, becauſe they depreſs and leſſen the Pulſe and Breathing, ſometimes alſo (as we have ſaid before) they make them faulter, and by degrees wholly to ceaſe: Wherefore in Feavers, when the Blood being mightily deprav'd, ſeems to admit of no Criſis, or not a good one, and that at the ſame time it furniſhes but very few and weak Spirits to the Animal Oeconomy. Narcoticks are in a manner always deſtructive, and as it were poyſons: For though in the Plague and Malign Feavers, whilſt the Pulſe and Reſpiration are ſtrong, Treacle, Mithridate, and Diaſcordium, nay and Laudanum are often given with good effect, yet if at any time in thoſe Diſeaſes, and in other Feavers that do not carry ſo much malignity, the vital faculty languiſhes, thoſe famous Antidotes muſt be us'd but very ſparingly, and the ſtronger Opiats not at all. Moreover in a *violent Cough*, the *Phthiſick*, *Pluriſy*, *Empyema*, and other Diſeaſes of the Breſt, *viz.* in what ills ſoever nature is ſtirr'd up to diſcharge it ſelf on a ſudden of that which is offenſive, and oppreſſes the Breſt, and lifts at it with its greateſt effort, and at the ſame time the Organs of Reſpiration being deſtitute of a ſufficient plenty of Spirits, faulter and perform their work with great pain and difficulty; we muſt in ſuch a caſe forbear Opium no leſs than poyſon, for then Narcoticks increaſe and fix the weight to be remov'd, and leſſen the ſtrength of the parts that labour to throw it off.

Thirdly, As to the parts within the Belly, we find that Narcoticks often taken, proved ſometimes very injurious to the principal faculty, *viz.* the appetite of food (on which all nutrition, and the Root of Life depends) becauſe they very much blunt it, and often wholly deſtroy it: For when the Spirits reſiding in the interiour Coat of the Ventricle are ſtupified, or deſtroyed by the Particles of the Opiat; ſo that thoſe Nervous Fibres though emptied, no longer are corrugated, then all hunger ceaſes, and there is no appetite to food, nay the ſame being then offer'd to the Stomack,

Stomack, proving rather troubleſome than delightful to it, is preſently thrown up again. Moreover, for the ſame reaſon the concoctive force of the Ventricle is weakn'd, and the excretory motions as well of this, as of the Inteſtines grow tardy; for it's a common obſervation, that a ſlowneſs of concoction, and a tardineſs of going to ſtool, are the familiar effects of an Opiatick Medicine.

From what is ſaid, it will not be difficult to draw Phyſical Precepts and cautions concerning the right uſe of Opiats, which we may do by obſerving the four following things, *viz.* before a Narcotick Medicine be given, we muſt conſider, *Firſt*, What kind of conſtitution the Patient is of. *Secondly*, What kind of Diſeaſe it is he labours under. *Thirdly*, In what ſtate the Animal Spirits are, in reſpect both of the Animal and Vital functions. *Fourthly*, In what condition the Blood and other humours are.

1. As to the firſt, when a Hypnotick is indicated, ſee that the temperament, habit of Body, or Indiſpoſition, Cuſtom, or manner of Life of the Patient do not indicate the contrary. For example, thoſe that are of a mean ſtature, have a ſtrong, well-ſet, and ſquare Body, with a hot Blood, and a lively or quick aſpect are wont to bear this Medicine beſt, and moſt commonly receive benefit thereby; which alſo they may much more ſecurely adventure upon, if they have been us'd to it before; on the contrary it does not agree with, nay ſometimes it proves very prejudicial to thoſe who are too corpulent or very thin; alſo to thoſe who being of a ſubtle texture of Body, have their Spirits eaſily diſſipable, or being of a cold temperament, have their Fleſh ſoft and flaggy, and being of a ſluggiſh and intractable Nature, are of themſelves dull and ſleepy; to which this thing may be added, and it augments the weight of the reſt, if they never made a Trial of that Medicine before.

The nature of the Diſeaſe is ſometimes of great moment for, or againſt the uſe of Opiats. None but flattering Phyſicians will make uſe of them in ſlight affects. Moreover in ſome great Diſtempers they are either forbidden, or their uſe is much ſuſpected: In the *Palſy*, *Vertigo*, *Incubus*, *Apoplexy*, *Orthopnæa*, the *Dropſy of the Breſt*, or of the Abdomen in the *numbneſs and trembling of the Limbs*, in *very malign Feavers*, and in the *fits of intermitting Feavers*, or in the *Criſis* of others, Narcoticks are moſt commonly forbidden. Again, in a Cough with much and thick Spittle, the *Aſthma*, and in any other affects of the Breſt, with an oppreſſion of the Lungs, and in Hyſterick and other Convulſive Paſſions, they are to be given but rarely, and not without caution, and the advice of ſome prudent Phyſician: But in a *violent Head-*

ach,

ach, Catarrhs, the *Colick, Pluriſy, ordinary Feavers,* in *Vomiting,* the *Bloody Flux,* in *Nephritick* Fits, or fits of the *Gout,* and in any pains whatſoever, Opiats are not only allow'd, but we have recourſe to them as to a Divine *Panacæa.*

3. But as often as an Opiat is propos'd, or comes to be deliberated on, we muſt farther conſider in what ſtate the Animal Spirits preſiding in each faculty are, for if they are but few, or being oppreſt, flag already, and do not ſufficiently diſplay themſelves, certainly they muſt by no means be farther leſſen'd, or put in a conſternation by a Medicine: Wherefore whilſt the Animal faculties do not appear quick, nor with ſufficient vigour exert themſelves as to ſenſe or reaſon; or when the Pulſe and Reſpiration have the courſes of their Reciprocations but weak, alſo more quick or ſlow than uſually, or diſturb'd, and inequal: And laſtly, if a ſtupor and enervation with an unwonted Languor has ſeiz'd the Members and Parts for Motion, we muſt wholly forbear Hypnotick Medicines; but we may be free to uſe the ſame, if at any time they are Indicated by reaſon of ſome great affects, and that the Animal Spirits at the ſame time are ſtrong enough, according to theſe and the other reſpects, or alſo if they are too much expanded, or grown too raging and unruly.

4. In the mean time the ſtate of the Blood and humours is not to be neglected, for ſometimes the uneven, or ill condition of theſe wholly forbids Opiats, or permits them to be taken but ſparingly, and with ſome reſtriction. The Blood Indicates againſt their uſe when it is amiſs either in its quantity, or in its quality, or Craſis: As to the former, the bloody Latex either abounds, or is deficient, and in both reſpects it excludes Narcotick Medicines. For firſt, if at any time the Blood grown turgid through its plenty, and withal boiling in a Feaver, ſo exceedingly extends the Veſſels as to make them ſtrout forth; and therefore the precordia mightily labour to circulate it as quick as poſſible, by moſt ſwiftly repeated turns of the *Syſtoles,* leſt it ſomewhere ſtagnates or overflows; then certainly to give a Narcotick, whereby that labour and laſt effort of the Heart, ſo neceſſary for preſerving Life, would be hindred, were rather the Office of a Poyſoner, than of a Phyſician. Wherefore in an over fullneſs of Blood, Phlebotomy ought always to precede the uſe of Opiats. *Secondly,* No leſs damage is threatn'd from Narcoticks, if given when there is a want or ſcarcity of Blood, as after great Hæmorrhagies, long Faſtings, or long ſickneſſes: For when the current of the Blood is very ſlender, and by reaſon of its ſmallneſs ſcarcely continued, the Heart being mov'd with as quick a beat as may be, endeavours (as it were with redoubled efforts) to give it a moſt quick Circulation, leſt its courſe be interrupted, and conſequently ceaſes: Hence it is ob-

vious to conceive how greatly prejudicial Opiats are, which put a ſtay, or lett to this endeavour of the Heart, ſo very neceſſary in ſuch a juncture. And indeed it ſeems to be for this reaſon, that we forbid ſleep to Women preſently after Child-birth, when the *Lochia* flow in abundance, and to all others when a conſiderable quantity of Blood has been taken from them, and in great Hemorrhagies, to wit, leſt the Heart be deſerted by the Spirits during ſleep, with which it ſwiftly circulates the leſſen'd current of the Blood. Moreover ſometimes the Blood being faulty in its quality, or (to ſpeak more properly) in its *Craſis*, Indicates againſt the uſe of Opiats; for when in a *Cacochymia*, or Feaver, the Blood being mightily fill'd with droſſy Excrements, ought to be agitated with a greater effort of the Heart, and be more ſwiftly circulated, to wit, that the Heterogeneous Particles may be ſubdued, and ſoon evaporate; the Operation of a Narcotick intervening, puts a ſtop to theſe endeavours of the *Præcordia*, and conſequently retards the Purification of the Blood, and ſometimes diſappoints it.

As to other Excrementitious humours uſually heap'd together in the Ventricle, or the Inteſtines, theſe alſo muſt be purg'd forth by Vomit or Seige before an Opiat be given: For otherwiſe being there fixt, they will ſtick more pertinaciouſly: For the Fibres of thoſe parts being ſtupified by the Medicine, are not irritated as before; nor do they readily ſet upon excretory Convulſions for expelling thoſe droſſy ſuperfluities, or perform it with any vigour. Wherefore according to the ancient Precept; *If any thing be to be Evacuated, let it be done before a Narcotick be given.*

The Kinds and Preſcripts of Opiats.

THe ſafeſt Narcotick, and which is generally approv'd of by long experience is the Poppy and preparations of it: Wherefore as often as we endeavour effectually and ſafely to provoke ſleep, the whole ſtreſs of the Medicine is Plac'd in *Opium* or *Diacodium*.

As to the Heads of white Poppies, with the Seeds out of which *Diacodium*, alſo Decoctions, Emulſions, and other Hypnotick Confections are made; it plainly appears that theſe have much leſs of a Narcotick Sulphur in them, than the concreted Juice of Opium; and what they have of it, is much more pure and innocent: Wherefore we give oftner, and with more ſafety Medicines made

made of theſe, nor ought we to uſe Laudanum, but when through the violence of Symptoms, Diacodiats will not ſerve: Again ſince theſe have in them leſs of virulency, they do not want much preparation, but either a ſimple Decoction, or Infuſion, or Expreſſion being made of them, they may be apply'd to Phyſical uſe. Now Opium is ſeldom preſcrib'd ſimply, and by it ſelf, but is wont to be corrected and compounded after a various and diverſifyed manner of preparation, that it may become a ſafe *Anodine.*

The wild Poppy has a certain Hypnotick vertue, but much more mild and gentle than that other; wherefore in certain caſes it agrees excellently well, and we may be more ſecure as to its uſe. Of this a Syrup and a diſtill'd water is always ready prepar'd in Apothecaries Shops, which in many continual Feavers are often given with good ſucceſs, and they are judg'd to have a certain ſpecifical virtue in Curing the Peluriſy, becauſe they take away pains, and by putting ſome ſtay to the Pulſe, abate the Feaveriſh boiling of the Blood. Moreover a Tincture is made of its Flowers Infus'd in Brandy, which is a famous Medicine amongſt Empiricks and good Women, and is averr'd to be good againſt Surfeits. The reaſon of which effect ſeems to be, that the Spirit of Wine frees the Contents of the Stomack from putrefaction, and the Narcotick force of the Flowers prevents the Invaſion of the Feaver.

I ſhall now ſet down certain Select Forms of Narcoticks; which I ſhall alſo digeſt into certain *Claſſes*, according as the Opiats have for their *Baſis*, either the Syrup or diſtill'd water of the wild Poppy, or *Diacodium*, or *Laudanum Extractum*, or *Liquidum*, or *Pilul. de Styrace*, or *de Cynogloſſo*, or laſtly, *Philonium.*

Take the water of wild Poppies, and Cowſlip water, of each ſix Ounces, Syrup of red Poppies two Ounces, Sal Prunella half a Dram, mix them: Make a Julape, the Doſe is three or four Ounces thrice a day in the Pleuriſie, Pains, watching without a Feaver, or any manifeſt Cauſe.

Take of Poppy water, from four Ounces to ſix: Let it be taken now and then by it ſelf twice or thrice a day for the ſame intent.

Take Diacodium, from half an Ounce to an Ounce, Cowſlip water three Ounces, Treacle water three Ounces: Make a Potion.

Take Carduus water three Ounces, Diacodium half an Ounce, Spirit of Hartſhorn, from half a Scruple, to a Scruple; Make a draught for procuring ſleep and ſweat.

Take Diaſcordium half a Dram, Gaſcoins Powder a Scruple, Diacodium two Drams, mix them; Let it be taken in a ſpoon.

Take Diacodium three Ounces, Snail water an Ounce, mix them; Its proper in the Cough and Phthifick: The Doſe is a ſpoonful going to Reſt, and if need be, take it again after Midnight.

Take London *Laudanum a Grain, Powder of Claws Compound from half a Scruple, to a Scruple, with a ſufficient quantity of Syrup of Clove-Gillyflowers: Make three Pills to be taken going to Reſt.*

Take Laudanum a Grain, Stomack Pills with Gumms half a Dram: Make four Pills to be taken going to reſt, in the Colick.

Take Laudanum, from a Grain, to a Grain and a half, Diaſcordium a Scruple: Make a Bolus, inſtead of Diaſcordium, you may put the Confection of Alkermes, or of Hyacinth.

Take Laudanum a Grain, diſſolve it in a ſpoonful of Treacle water, add of Cowſlip water two Ounces: Make a draught.

Take of our Liquid Laudanum tartariz'd twenty Drops, give it in a ſpoonful of Aqua Mirabilis, or of Cinnamon water, or of any other fit Vehicle: Its proper in Colick, Nephritick, or Gouty pains.

Take Species of Hiera half a Dram, of the foreſaid Laudanum twenty drops: Make four Pills, let them be taken going to reſt, for Purging, and eaſing pains of the Colick at the ſame time.

Take Liquid Laudanum Cydoniated, from fifteen Drops to twenty: Give it in a ſpoonful of ſmall Cinnamon water for the Flux.

Take Conſerve of red Roſes an Ounce, Venice Treacle, Confection of Hyacinth, of each two Drams, Pulvis Pannonici Rubri a Dram, Laudanum Cydoniated two Drams, Syrup of Coral what ſuffices: Make an Electuary, the Doſe is a Dram every fourth or fifth hour, in a violent Bloody Flux with Gripes.

Take Pilul. de Styrace, from five Grains to ſix, Lac Sulphuris half a Scruple, Oyl of Amiſeeds a Drop, Balſam of Peru what ſuffices: Make three Pills to be taken in the Cough, Aſthma, &c.

Take Pilul. de Cynogloſſo, from ſix Grains to eight: Make two Pills to be taken going to reſt for the ſame intents.

Take Philonium Romanum, from one Scruple to two, Conſerve of Clove-Gillyflowers half a Dram, mix them: Make a Bolus to be taken going to reſt. Its proper for the Colick in a cold temperament.

I ſhall now ſay ſomething concerning the Effects of the great Anti-Hypnotick *Coffee*.

Coffee, though in ſome caſes it be very profitable and Phyſical, in others it is hurtful and unwholeſome; for we ſee that great *Coffee-drinkers* become lean, and are very often ſubject to be Paralytick, and grow impotent for generation.

Yet as to Affects of the Brain, and the *Genus Nervoſum*, I very often preſcribe this Drink for them.

For indeed in very many Cephalick Diſeaſes and Infirmities, *viz.* in Head-aches, Giddineſs, the Lethargy, Catarrhs, and the like, where with a full habit of Body, and a cold temperament, or one

one that is not hot, and a watery Blood, there is a moiſt Brain with a ſluggiſhneſs and dullneſs of the Animal Spirits, *Coffee* has often a very good effect, for being daily drank, it wonderfully clears and enlightens each part of the Soul, and diſperſes all the Clouds of every function. But on the contrary, thoſe who being thin, and of a Bilious, or Melancholick temperament, have a ſharp, or burnt Blood, a hot Brain, and the Animal Spirits too much ſtirr'd and reſtleſs, ought to forbear this Drink altogether, as being apt to pervert both the Spirits and humours in a greater meaſure, and to render them wholly unfit, and unable to perform any functions: For I have obſerv'd many, not having a ſufficient plenty of Spirits, and being alſo ſubject to the Head-ach, Vertigo, Palpitation of the Heart, and a trembling or numbneſs of the Limbs, who preſently after drinking *Coffee* became worſe as to thoſe Affects, and ſuddenly found an unuſual Languor in their whole Body.

THE

THE

LONDON PRACTICE

OF

PHYSICK,

Contained in the *Second Part* of the

Pharmaceutice Rationalis

of Dr. *WILLIS.*

THis Second Part of the *Pharmaceutice Rationalis*, is divided into three Sections, whereof the First treats of Medicines that regard the *Thorax*, the Second of Medicines that regard the *Viscera* of the *Belly*; the third of outward Medicines, *viz. Phlebotomy*, *Vesicatories*, *Issues*, *Cutaneous Affects*, &c.

SECT.

SECT. I.

Of Medicines that regard the Thorax.

CHAP. I.

Inſtructions and Preſcripts for the Cure of the Phthiſick, and Conſumption of the Lungs.

WE muſt obſerve the divers ſtates of this Diſeaſe, or the diſtinctive Marks which belong to it: As Firſt, when it is meerly a *Cough*: Secondly, when it begins to degenerate into a *Phthiſick* or Conſumption: Thirdly, when the Phthiſick is conſummated, or paſt recovery.

1. And Firſt, as to a new Cough from what Cauſe ſoever it ariſes, it is never free from ſuſpicion of danger, if it happens in a Body prediſpos'd to a Phthiſick; though in other robuſt Perſons it be not preſently to be fear'd: For if at any time it be rais'd from ſome great evident cauſe, and being without a Fever, and an indiſpoſition of the whole Body, it proves not very troubleſome, then it is ſaid to be only a *cold taken*, and is either wholly neglected, or ſoon Cur'd without much ado. Again, if it be accompanied with a ſmall Feaver, Thirſt, and loſs of Appetite, there is hope that the Blood being reſtor'd to its due temper, the Cough will alſo ceaſe of its own accord; but if drawing in length, and not eaſily ſubmitting to vulgar Remedies, it produces much Spitting, and that diſcoloured, it ought no longer to be neglected, but muſt be dealt withal with a method of Cure, and fit Remedies, and an exact Form of Diet: For then it may be ſuſpected that the Lungs having receiv'd ſome prejudice in their Conformation do not tranſmit the Blood entirely, but with a depoſition of the *Serum*, or *Lympha*, and often the nutritive Juice; and likewiſe that thoſe humours there depoſed do putrify, and conſequently that by a reciprocal injury they taint the Blood, whereby it ſtill offends the Lungs the more.

2. But

2. But if to a Cough daily growing worſe and worſe, with much and thick Spitting there be added a *Languor*, and falling away of the whole Body, a loſs of Appetite, difficult breathing, thirſt, and a boiling of the Blood; there is great cauſe to ſuſpect that a Phthiſick is at leaſt begun, if not well advanced: Wherefore we muſt then uſe all our endeavours both to free the Lungs from the offenſive load of matter already gather'd together in them, and to fortifie them againſt the continual Incurſion of the ſame; and at the ſame time to cleanſe the Maſs of Blood of its dregs, and to reſtore it to a good *Craſis*, whereby it may duly contain its Seroſities, and other humours within its own texture, or convey them to ſome other place than the Lungs.

3. But if beyond the ſtate ev'n now deſcrib'd of this Diſeaſe, the Spittle daily increaſes, and becomes more diſcolour'd, and all other things ſtill growing worſe and worſe, there be join'd to it a total decay of ſtrength, and a Hectick Feaver, with a continual thirſt, Night Sweats, a dying Countenance, with a falling away of fleſh ev'n to the drought of a *Skeleton*; then there is no room left for Phyſick, but only for a ſad Prognoſtick, or at leaſt all hope of Cure being laid aſide, we have nothing left to inſiſt on but *Anodines*, which may help towards an eaſie death.

Wherefore according to the ſaid three ſtates of this Diſeaſe, its method of Cure muſt be in a threefold manner: *viz.* Firſt we muſt preſcribe what is to be done for Curing a Cough, whilſt being not entred the limits of a Phthiſick, it has only the name of a *Cold taken*. Secondly, what is proper in a beginning Phthiſick. Thirdly, what is to be done when it is conſummated and deſperate.

1. Men of a tender conſtitution, or ſuch as are inclin'd to a Conſumption from their birth, or have ſometimes formerly been us'd to be endanger'd by a Cough, ought immediately as ſoon as they find it coming to ſtand on their guard, and betake themſelves to the Rules of Phyſick, according to which, to proceed methodically in a way of Cure, the *Therapeutick Indications* muſt chiefly be theſe three. 1. To appeaſe or take away the diſorder of the Blood, whence the Fluxions of the Serum proceed. 2. To derive from the Lungs to the Pores of the Skin, or Urinary paſſages, and other Emunctories, the dreggy Excrements of the Blood, and all ſuperfluities apt to depart from it. 3. To corroborate the Lungs themſelves againſt the reception of the *Serum*, and other humours; and likewiſe to fortify them againſt the invaſion of outward Cold, from which they are wont to receive a farther prejudice. We ſhall ſpeak of each of theſe a little more at large.

1. The

1. The firſt Indication regards both the Effervescency of the Blood, in that it grows over hot, and boils in its Veſſels, by reaſon of the *Effluvia*'s being reſtrain'd within it; as alſo its diſſolution, in that being looſen'd in its Texture, it lets fall too much the *Serum* and other Humours from its embraces, to remove both a thin form of Dyet muſt be ordered, and the perſon being careful to avoid all injury from outward Cold, a pretty free tranſpiration muſt be procur'd, or at leaſt the wonted tranſpiration muſt be reſtor'd: For theſe ends let the Patient preſently be thicker cloath'd, and let him keep himſelf in Bed, or within his Chamber; at leaſt let him not go forth of Doors: Evenings and Mornings let a gentle Sweat be rais'd by giving him Poſſet-drink with Roſemary, or Sage boil'd in it: If notwithſtanding the Cough grows worſe, Bleeding proves often of good effect, ſo his ſtrength and conſtitution bear it; after which Hypnoticks generally do well, inaſmuch as they retard the motion of the Heart, and conſequently the overhaſty Courſe of the Blood. Moreover, they cauſe it to paſs the Veſſels of the Lungs gently, and with moderation, without caſting off any great quantity of Seroſities; and to ſend forth what is ſuperfluous either by Sweat, or by Urine: For this purpoſe alſo Pectoral Decoctions muſt be given, becauſe they deſtroy the Acidities of the humours, and hinder, and put a ſtop to the diſſolution of the Blood, and its fuſion into Seroſities. For the like reaſon and manner of Operating, Medicines prepar'd of Sulphur are of ſuch egregious uſe againſt the Cough.

2. The Second Indication, *viz.* the derivation of the *Serum*, and other dreggy Excrements of the Blood from the Lungs, and their Evacuation by other ways, is perform'd by Diaphoretick Medicines, Diureticks, and gentle Purgers; which muſt go along with other Medicines, or be now and then interchangeably us'd with them. Therefore after Bleeding, we uſually give a gentle Purge, and ſometimes repeat it. In the Pectoral Decoctions, let the Roots of *Chervil*, *Butchers-broom*, *Elecampane*, and other things moving Sweat and Urine be of the Ingredients: *Millepedes*, *Volatile Salt* of *Amber*, and other *fixt Salts*, and *Powders of Shells*, made into Pills with *Turpentine*, are often given with good effect.

3. The Third Indication, *viz.* the fortifying of the Lungs, and its Ductus's againſt the Fluxions of the humours and the aſſaults of the Cold, and the ſuppreſſion of the Catarrh, vulgarly ſo call'd, is perform'd by *Linctus*'s, *Eclegma*'s, and other particular Remedies, and has chiefly a regard to two things, *viz.* gently to cloſe the Mouths of the Veſſels and Glands that gape into the *Trachea* with Aſtringents, leſt they caſt forth the Seroſities too much in-

to it: And Secondly, To make ſmooth and glib the ſides of the *Ductus's* of the *Trachea*, that they be not offended, and thence continually ſtirr'd up to a troubleſome Cough, either by the ſharp *Serum* coming upon them, or by the aſſault of any outward Cold; and moreover, that thoſe *Ductus's* being made ſlippery enough, the Spittle ſticking ſometimes very faſt to the ſides of them, may be more eaſily gotten off and Cough'd up: For the Firſt intent it is, that *Conſerve of red Roſes, Olibanum, Maſtick, Lohoch de Pino, Syrup of Jujubes, of dried Roſes, of Cup-moſs*, and other Aſtringents are ſo often ingredients in pectoral preſcriptions. On the account of the ſecond intent *Licorice*, with its various preparations is accounted ſo famous a remedy againſt any Cough whatſoever. For this end *Syrups, Eclegma's*, and all other ſweet Pectorals ſeem to be ordered; to which is added *Oyl of ſweet Almonds*, either given by it ſelf, or reduc'd into the Form of ſome Milky pap by long ſtirring it with ſome *Pectoral Syrup*. Theſe are the chief *Therapeutick Indications*, together with the apt intentions of Curing, which ſeem to be of moſt conſiderable uſe for a new Cough, whilſt it is yet free from the ſuſpicion of a Phthiſick, or at leaſt not yet entred its manifeſt limits: It now remains after this general method briefly given unto you, to ſet down ſome Select Forms of Medicines appropriated to each Intention: Theſe, though they are manifold, and diverſly prepar'd, yet thoſe that are of chiefeſt note, and moſt in uſe are *Mixtures, Linctus's, Eclegma's, Tinctures, Balſams, Troches, Tablets, Powders, Pills, Decoctions* and *diſtill'd Waters*: We ſhall give you ſome of the moſt Elegant Receipts of each.

1. *Mixtures.*

TAke Syrup of Meconium, and of Jujubes, of each an Ounce and a half, Olibanum powdred a Dram, Water of Earth-worms, or Hyſterick Water, or Water of Peony Compound a Dram: Mix them, the Doſe is one ſpoonful going to Bed, and after Mid-night.

Take Water of Snails, and of Earth-worms, of each an Ounce and a half, Liquid Laudanum Tartariz'd two Drams, Syrup of Violets an Ounce: The Doſe is one ſpoonful going to Bed.

Take Water of Snails ſix Ounces, Syrup of the Juice of ground Ivy three Ounces, Flowers of Sulphur half a Dram: Mix them, the Doſe is a ſpoonful going to Bed, and early in the Morning.

Take of our Syrup of Diaſulphur four Ounces, Water of Earth-worms an Ounce: The Doſe is one ſpoonful after the ſame manner.

2. *Linctus's.*

2. *Linctus's.*

TAke Syrup of Jujubes, and Maidenhair, of each an Ounce and a half, Syrup of red Poppies an Ounce: Mix them, let it be taken with a ſtick of Licorice.

Take Oyl of ſweet Almonds freſh drawn, Syrup of Maiden-hair, of each an Ounce and a half, Sugar Candy two Drams: Mix them by bruiſing them in a Glaſs Mortar, or ſhaking them in a Glaſs Vial till they grow white.

3. *Eclegma's.*

TAke Conſerve of red Roſes, two Ounces and a half, Lohoch Sanum an Ounce and a half, Species Diatragacanthi frigidi a Dram and a half, Flowers of Sulphur half a Dram, Syrup of Violets, or of red Poppies what ſuffices: Make a ſoft Lohoch; the Doſe is a Dram and a half in the Evening, and early in the Morning; at other times let it be taken with a ſtick of Licorice.

Take Powder of the Leaves of Hedge-muſtard, or of Rockets an Ounce and a half, Clarified Honey four Ounces: Mix them, make a Lohoch, give it after the ſame manner; it is proper in a cold Conſtitution.

4. *Tinctures.*

TAke Tincture of Sulphur free from any Empyreuma three Drams: The Doſe is from ſix drops to ten at Night, and early in the Morning in a ſpoonful of Syrup of Violets, or of the Juice of ground Ivy. I know not a more excellent Remedy in any Cough, ſo there be no Feaver.

Take Tincture of Sulphur of Antimony two Drams: The Doſe is twenty drops Evenings and Mornings in a ſpoonful of Pectoral Syrup.

Take Tincture of Gumm Ammoniacum prepar'd with the Tincture of Salt of Tartar an Ounce: The Doſe is from fifteen drops to twenty. Tinctures of Galbanum, of Aſſa-fœtida, of the Gum of Ivy, prepar'd after the ſame manner, are likewiſe proper in a cold Conſtitution.

5. *Balſams.*

TAke Opobalſamum two Drams: The Doſe is from ſix Drops to ten, in a ſpoonful of the Water of Hyſſop, or Pennyroyal, or of any other Pectoral Water.

Take Artificial diſtill'd Balſam, commonly call'd Mother of Balſam two Drams: The Doſe is from ſix Drops to ten, in a ſpoonful of Syrup of Violets, or of Canary Wine at Night, and in the Morning.

Take Balſam of Sulphur two Drams: The Doſe is from five drops to ten after the ſame manner.

Take Balſam of Peru a Dram: The Doſe is from two drops to four, or ſix, in Conſerve of Violets.

6. *Troches.*

TAke Species Diatragacanthi frigidi, half an Ounce, Licorice a Dram, Flowers of Sulphur two Scruples, Flowers of Benzoin a Scruple, Sugar Penids three Ounces, Solution of Tragacanth made in Hyſſop water what ſuffices: Make a Paſte, form it into Troches, weighing half a Dram; let one of them be taken pretty often in the Day or Night.

Take Seeds of white Poppies ſix Drams, Powder of red Poppy Flowers a Dram, Extract of Licorice two Drams, Lac Sulphuris half a Dram, Sugar Penids two Ounces, Mucilage of the Seeds of Quinces what ſuffices: Make a Paſte, and form it into Troches.

Take Species Diaireos, and of Fox Lungs, of each half an Ounce, Sugar Penids two Ounces, Solution of Tragacanth, what ſuffices: Make a Maſs to be form'd into Troches.

Take Powders of Elecampane Roots, Anniſeeds and Licorice, of each two Drams, Flowers of Sulphur a Dram, Tablet Sugar an Ounce and a half, Juice of Licorice diluted and ſtrain'd, what ſuffices: Make a Maſs for Troches.

7. *Tablets.*

TAke Species Diatragacanthi frigidi three Drams, Powder of red Poppy Flowers, Lac Sulphuris, of each half a Dram, Sugar diſſolv'd in Poppy water, and boil'd to a conſiſtency for Tablets four Ounces: Make Tablets weighing half a Dram.

Take

Take Species Diaireos, and of Fox Lungs, of each three Drams, Flowers of Sulphur, Elecampane Roots, of each half a Dram, White Benzoin a Dram: Make a fine Powder, add Oyl of Anniſeeds a Scruple, Sugar diſſolv'd, and boil'd to a conſiſtency for Tablets eight Ounces: Make Tablets weighing half a Dram.

8. *Powders.*

THeſe, though ſeldom, yet ſometimes are given in a Cough and affects of the Lungs with good ſucceſs.

Take of the Reddiſh tops of ground Ivy what ſuffices, being bruis'd let them be made into a Cake, and preſently dry'd in the Sun, then reduce it into a fine Powder, and keep it in a Glaſs; this Plant retains its vertue, with its ſmell and colour excellently well for a long time, beyond all Conſerves and Syrups, and is of wonderful efficacy in a great and obſtinate Cough: Give from half a Dram, to a Dram twice a day, with a diſtill'd water, or Pectoral Decoction.

After the ſame manner, Powders are prepar'd of other Pectoral Plants, and are given with good ſucceſs.

Take Cup-moſs three Drams, Lac Sulphuris a Dram, Sugar-candy half a Dram: Make a Powder, the Doſe is from a Scruple to half a Dram twice a day. This Powder is proper for thoſe that are troubled with a Convulſive or Chin-Cough.

Take Flowers of Sulphur, Olibanum, Ceruſe of Antimony, of each two Drams, divide it into twelve parts: Give one Mornings and Evenings in a ſpoonful of ſome fit Vehicle.

9. *Pills.*

TAke Aloes Roſat. or rather Pilul. Ruffi, Flowers of Sulphur, of each a Dram and a half, Flowers of Benzoin a Scruple, Juice of Licorice diluted with water of Snails what ſuffices: Make a Maſs, form it into little Pills; let four of them be taken at Night, repeating the Doſe every Night, or every other Night.

Take Powder of Elecampane Roots, Licorice, and Flowers of Sulphur, of each a Dram, Flowers of Benzoin half a Dram, Tar what ſuffices: Make a Maſs, and form it into ſmall Pills; the Doſe is three or four at Night, and early in the Morning.

Take Millipedes prepar'd two Drams, Powder of the Seeds of Nettles and Burdock-ſeeds, of each half a Dram, Oyl of Nutmegs drawn by diſtillation a Scruple, Salt of Amber half a Dram, Juice of Licorice what ſuffices: Make ſmall Pills, let three of them be taken at Night, and in the Morning.

10. *Decoctions.*

THeſe are taken either by themſelves, or with Milk added to them: Among thoſe of the firſt kind, the Pectoral Decoction according to the *London Diſpenſatory*, firſt preſents it ſelf; which is to be taken twice a day, from four Ounces to ſix or eight.

Take Leaves of ground Ivy, Maiden-hair, Harts-Tongue, Colts-foot, Agrimony, of each a handful, Roots of Chervil, Butchers-broom, of each an Ounce, Seeds of Carthamus and ſweet Fennel, of each half an Ounce, boil them in ſix Pounds of fountain water, till half be conſum'd, adding towards the end either of Licorice three Drams, Raiſins ſton'd two Ounces, and ſix Jujubes, or of the beſt Honey three Ounces: Make an Apozeme, Scumming off the Froth, and Clarifying it with the white of an Egg. The Doſe is ſix Ounces warm twice or thrice a day.

Decoctions to be taken with Milk are us'd Mornings and Evenings inſtead of a Breakfaſt and a Supper, according to the manner following.

Take great Daiſie Flowers a handful, Snails cleans'd, in number three, Candied Eringo Roots half an Ounce, Barley three Drams, boil them in a Pound and a half of fountain water to a Pound: Take from ſix Ounces to eight warm, adding as much of Milk, and afterwards let the quantity of this be encreaſed by degrees.

After the ſame manner, let Cup-moſs, alſo the Leaves of ground Ivy, St. John's-wort, and of other Pectorals be boild, and taken with Milk.

Decoctions of Woods frequently conduce very much to the Cure of an obſtinate Cough, eſpecially being taken conſtantly for ſome time inſtead of Beer, as an ordinary Drink.

Take Roots of Sarzaparilla four Ounces, of China two Ounces, red and white Saunders of each half an Ounce, ſhavings of Ivory and Hartſhorn, of each three Drams: Let them infuſe according to Art, and boil in eight Pounds of fountain-water to four Pounds, adding to it of Licorice ſix Drams, Raiſins ſton'd an Ounce and a half: In a Phlegmatick or cold Conſtitution, add Raſpings of Guaiacum.

II. *Diſtill'd Waters.*

EVery Man may make many and different Forms of theſe, as occaſion requires, and according to the Conſtitution of the Patient they may chooſe ſometimes Milk alone, ſometimes Milk with ſome part of Wine, ſometimes Ale, or Brunſwick Beer: I ſhall give you a Specimen of theſe as follows.

Take Leaves of ground Ivy, Hyſſop, Pennyroyal, of each four handfulls, Snails half boil'd in their Shells two Pounds, Nutmegs ſlic'd, in number ſix. All of them being ſmall ſhred together, pour to them of new Milk eight Pounds: Diſtil them in common Organs, the Doſe is three Ounces twice or thrice a day by it ſelf, or with ſome other Medicine: When its taken, let each Doſe be ſweeten'd with Sugar-Candy, or with Syrup of the Juice of ground Ivy.

In a Conſtitution that is not hot, eſpecially if there be no fervent heat of the Blood or Præcordia, to ſix or ſeven Pounds of Milk add of Canary Wine a Pound or two, and in a Phlegmatick or Aged Body, inſtead of Milk, let the *Menſtruum* be Ale or Brunſwick Beer.

Moreover, in the Winter when Snails are not eaſily, or ſcarce at all to be gotten, the Lungs of a Lamb, or of a Weather may properly enough ſupply their place, and ſometimes alſo thoſe of a Calf half boil'd and ſlic'd very ſmall; and let them be diſtill'd with the foreſaid Ingredients, and added to a fit *Menſtruum* in common Organs, or a Roſe-ſtill.

In this *Claſſis*, where its treated of a Cough not yet arrived to a Phthiſick; we may aptly range the Convulſive, or ſuffocating Cough of Children, commonly called the *Chin-Cough*. This Diſeaſe chiefly aſſaults Children and Infants, and at certain times, *viz.* in the Spring eſpecially and Fall, its uſually Epidemical. The Diſeaſed have frequent and very cruel fits of Coughing, in which the Organs of Reſpiration do not only greatly labour, but likewiſe being affected with Convulſions, variouſly interrupt, ſuſpend, or pervert their Actions: But for the moſt part the Diaphragm being ſeiz'd with Convulſions by it ſelf, or by the impulſe of other parts, obſtinately ſo continues for a very long ſpace ſometimes its Contraction, and ſometimes its Dilatation, that Inſpiration or Expiration being hindred for a time, the Vital Breath can ſcarce be drawn at all; ſo that the Coughers cry out as though they were ſtrangled, and their Countenance turns black through the Stagnation of the Blood: If haply thoſe Organs being not ſo much ſeiz'd with Convulſions, they can Cough out freely, nevertheleſs they

they are ſtill forc'd to Cough with violence, and ſo long till their ſtrength fails them.

Though this Cough ſeldom kills, or proves very dangerous, yet it is very difficult to be Cur'd, and oftner ceaſes of it ſelf as the year changes, then it is conquered by Medicines. The reaſon is, that we muſt not only in this, as in an ordinary Cough, alter the Blood, and derive its droſſy Excrements from the Lungs to the habit of the Body, to be ſent forth by tranſpiration, but we muſt likewiſe take care to correct the Nervous Juice, which in this caſe is vitiated with a Heterogeneous and Elaſtick matter which cauſes the Convulſive motions.

As to the Cure of this Diſeaſe, the method of Curing us'd in other Coughs ſeldom proves ſucceſsful in this; wherefore only Empirical Remedies are commonly Adminiſtred.

Amongſt many Remedies of this kind, the two following are uſually preferr'd before all others whatſoever, and are chiefly in uſe, *viz.* to give inwardly Cup-moſs, and various preparations and compoſitions of it, and if there be need of any further Cure, the Child is to be put into ſome ſudden fright. And if theſe things work not the deſir'd effect, Ptiſans, Syrups, Julapes, or Decoctions and other Pectorals are laid aſide, and commonly all other Medicines are thrown by, expecting till the Diſeaſe either ends of it ſelf in proceſs of time, or be Cur'd by the ſucceeding change of the year.

Cup-moſs, ſo commonly us'd amongſt us againſt Coughs of Children, has an Aſtringent vertue, (as we find by its taſt) and contains Particles of a ſmart nature, which denote a plenty of Volatile Spirits, whence we gueſs its uſe to be to fix the Blood, and to moderate the Fluxions of the Serum, and likewiſe by Volatiliſing the Nervous Juice, to take away its Convulſive diſpoſition: Its uſually given in the form of a Powder, Decoction, and Syrup according to the following Forms.

Take Cup-moſs Powdred a Dram, Sugar-Candy a Scruple: Mix them, divide it into three or four parts, take a Doſe Evenings and Mornings, with a fit Vehicle.

Take of the ſaid Moſs two Drams, Lac Sulphuris two Scruples, Powder of Anniſeeds a Scruple: Divide it into ſix parts, give them after the ſame manner.

Take of the ſaid Moſs a Dram, boil it in a quantity of Milk ſufficient for one Doſe; let the ſtraining be taken Evening and Morning: For thoſe with whom Milk does not agree, or to whom it does no good; let a decoction of it be prepar'd in fountain water, or Hyſſop water, or any other Pectoral water, and let it be given to two or three Ounces twice a day, ſweetning it with Sugar, or ſome proper Syrup.

Take

Take of this Moſs an Ounce, boil it in two Pounds of ſome Pectoral Water, till half be conſum'd: To the ſtraining, add of Sugar-Candy a Pound, and let it evaporate in a gentle Bath heat, to the conſiſtency of a Syrup.

The other remedy commonly in uſe for the Cough of Children, is to put them into ſome ſudden fright, as by ſetting them in a Binn when a Mill goes, *&c.* which ſometimes Cures the Diſeaſe on a ſudden; the reaſon of which doubtleſs conſiſts in this, that the Animal Spirits being put to flights, and driven into new diſtractions, quit their former diſorders, and likewiſe that the Convulſive matter is either diſſipated by that perturbation, or driven into other Nerves, where it proves leſs offenſive.

The Empirical Cure of this Diſeaſe being thus ſet forth, together with the Remedies vulgarly us'd, and their Ætiologies at leaſt probably explicated: I ſhall now ſet down a certain rational method of Curing, and haply more efficacious againſt theſe ſorts of Coughs of Children: Therefore in ſuch a caſe, I uſually preſcribe according to the Forms following, and ſometimes ſucceſſively enough: And Firſt, ſince we muſt begin with a Purge;

Take Syrup of Peach Flowers a ſpoonful, Hyſterick water a Scruple: Mix them, let it be taken Cum Regimine.

Or, Take Calamelanos ſix Grains, Scammony ſulphurated, Roſin of Jalup, of each three Grains: Make a Powder, give it in a little pulp of preſerv'd Cherries to a Boy of ſix Years Old; and let the Doſe be encreas'd, or leſſen'd according to the Age: Let the Purge be repeated in ſix or ſeven days.

If the Patient (as it often happens) be prone to Vomit, take Oxymel of Squills ſix Drams, Salt of Vitriol four Grains: Mix them, give it to a Child ſix Years Old, and according to this proportion, let a Doſe be accommodated to others: I have known this kind of Vomit given every Morning for four or five days ſucceſſively to have done well.

Bliſtering Plaiſters are much us'd, and let them be apply'd ſometimes to the Nape of the Neck, ſometimes behind the Ears, ſometimes to the Inſides of the Arms near the Armpits, and as ſoon as the Sores in thoſe places begin to heal, let others be rais'd elſewhere.

Inſtead of Beer, let the following Decoction be his ordinary drink.

Take China Roots an Ounce and a half, all the Saunders of each half an Ounce; ſhavings of Ivory and Hartſhorn, of each three Drams: Let them infuſe according to Art, and boil them in ſix Pounds of fountain water till half be conſum'd, adding of Raiſins ſton'd an Ounce and a half, Licorice three Drams.

Take Spirit of Gum Guaiacum with Sal Armoniack a Dram, Syrup of Cup-moſs three Ounces, Hyſterick water an Ounce: The Doſe is a little ſpoonful at Night, and Early in the Morning.

Or, Take Tincture of Sulphur two Drams: The Doſe is three drops at Night, and early in the Morning in a ſpoonful of Syrup of Cup-moſs.

To ſome perſons of a hot Conſtitution, and turning of a deep red, or rather black colour with Coughing, I have ſometimes ſucceſsfully ordered a Vein to be opened, or that two or three Ounces of Blood ſhould be drawn from them by Leeches.

Take live Millepedes cleans'd two Ounces, Powder of Anniſeeds a Dram, Nutmegs half a Dram, double refin'd Sugar an Ounce: Being bruis'd together, pour to them of Hyſſop water ſix Ounces, Magiſtral Snail water two Ounces: Stir them together a little with a Peſtle, and expreſs it ſtrongly; the Doſe is two or three ſpoonfuls twice a day.

Thus far of the Cough and its Cure, whilſt it is only an entrance to a Conſumption; now we muſt treat of this affect, having paſs'd the frontiers of this dangerous Diſeaſe, and ſet down a method of Cure, and forms of Medicines proper for Curing an Inveterate Cough, *viz.* when either neglected, or not eaſily yielding to Medicines, it begins to degenerate into a Phthiſick, that is to ſay, when it is come to that paſs; that the Blood being loosn'd in its Texture, does not only pour the ſuperfluous Serum, but even the Nutritive, and haply the Nervous Juice, the Lympha, and other its dreggy Excrements on the Lungs, and depoſes them within its Ductus's; and withal, that the depravation of the Lungs is by ſo much augmented, that its Veſiculæ being diſtended, or many of them broken into one, and ſo a Solution of Continuity, or an Ulcer being caus'd, a greater Maſs of Matter for the Conſumption is daily heap'd together: Moreover, and that the matter, in regard it is permitted to continue long there, Putrifies, and ſo ſtill corrupts the Lungs more, and taints the Blood paſſing through them. In this caſe the Therapeutick Indications are chiefly theſe three, *viz.* Firſt of all to ſtop the diſſolution of the Blood, which is the Root of all the miſchief, and to prevent it from pouring always matter in ſo great a plenty on the Lungs. Secondly, To evacuate by Expectoration the corruption gather'd together within the Lungs, and that ſufficiently in ſome ſhort time. Thirdly, To corroborate and dry the Lungs being diſſolv'd as to their unity, or become too lax and moiſt, or otherwiſe weak, leſt they are daily more corrupted, and receive the Morbifick matter always more and more. Each of theſe Indications prompts us various intentions of Curing, and requires divers ſorts of Remedies, and many ways of Adminiſtration; of which I ſhall here briefly touch the chief.

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Therefore what the firſt Indication ſuggeſts, to wit, to ſtop the diſſolution of the Blood, theſe three things (as much as may be) muſt be procur'd, *viz.* Firſt, that the Maſs of Blood may contain within it, and aſſimilate whatever Nutritive Juice it is ſupply'd with, and be ſo proportion'd with it, that it be not faulty either in quantity or quality. Secondly, That the Acidities engendred either in the Blood, or convey'd to it from elſewhere be ſo deſtroy'd, that the Blood retaining always its Mixture or Craſis, be not ſo ſubject to Fluxions or Fuſions. Thirdly, That all dreggy Excrements in the Blood be deriv'd from the Lungs to other Emunctories, and places of Evacuation.

As to the firſt of theſe intentions of Curing, that the Nutritive Juice be proportion'd to the Blood, before all things it muſt be ordered that Perſons troubled with a Cough and Phthiſick, abſtain as much as may be from Drink, and take liquid things but in a very ſmall quantity, ſo that the Blood being weak in its Craſis, may be able more eaſily to ſubdue the minute Portions of freſh Juice, as long as it is not too much cloy'd with it, and to retain it within its Texture. Again, let that freſh Juice conſiſt of ſuch Particles as are ſubtle and gentle, that they may be maſtered by the Blood, and be aſſimilated without any eager heat of conteſt: Wherefore Aſſes Milk, ſometimes alſo Cows Milk, or Goats Milk; alſo Water-gruel, Cream of Barley, Ptiſan, Almond Milks, and other ſimple ſorts of food agree better, and nouriſh more than Fleſh, Eggs, or Geily-broaths, ſtrong Ale, Wine, or any other kind of richer Fare. Secondly, That the Blood retaining its temperament, be not eaſily diſſolv'd into Seroſities offending the Lungs; as well its own Acidities, as thoſe of the other humours that are mixt with it, and eſpecially of the Nervous and Lymphick humours muſt be deſtroy'd: Which intention is excellently perform'd by Medicines prepar'd of Sulphur, which therefore in this caſe (ſo there be not a Hectick Feaver) are frequently given, and in a large Proportion. Wherefore let the Tincture, Balſam, Syrup, Flowers, and Milk of Sulphur be given twice or thrice a day in a good large Doſe; for the ſame purpoſe Traumatick or Vulnerary Decoctions, alſo Decoctions of Pectoral Herbs (commonly ſo call'd) and Roots are to be taken inſtead of ordinary drink: Moreover, Powder of Crabs Eyes, of Millepedes, and of other things containing an Alkaliſate or Volatile Salt, are often given with good ſucceſs. The Third intention of Curing, referring to the Firſt Indication, *viz.* That the dreggy Excrements of the depraved Blood, (in caſe they much abound) be withdrawn from the Lungs, and Voided by other Emunctories, ſuggeſts to us many ways to be put in practiſe for withdrawing them; For beſides Bleeding, Evacuation by Urine, and now and then a gentle

Purge (which have place in all Coughs, even in a beginning Phthiſick) we ought alſo to range here Baths, Breathing in a warm Air to promote perſpiration, alſo frictions of the extream parts, Dropax's, Iſſues, Veſicatories, ſhaving the Head, Errhin's, Apophlegmatiſms, and all other general or particular ways of Evacuating humours or vapours.

The Second Indication in a beginning Phthiſick, *viz.* that the corrupted matter depos'd within the Lungs, be every day readily and clearly diſcharg'd, is perform'd with expectorating Medicines: Theſe are ſaid to operate in a two-fold manner, according as their vertue is conveyed to the Lungs two ways. For ſome of them taken by the mouth, immediately ſend their active Particles into the *Trachea*, which partly by making the paſſages ſlippery, and by looſening at the ſame time the matter there ſticking, and partly by irritating the Excretory Fibres into Convulſions, cauſe an Expectoration: In which number Linctus's and Fumigations are eſteem'd the chief. Expectorating Remedies of the other kind, which are juſtly eſteem'd the beſt, exert their Energy by the conveyance of the Blood, for conſiſting of ſuch Particles which cannot be ſubdued and aſſimilated by the Maſs of Blood, when they enter it, being immiſcible with it, they are preſently caſt forth again, and penetrate from the Arteries of the Lungs into the Ductus's of the *Trachea*, where cleaving to the matter, they divide, attenuate, and ſo exagitate it, that the Fibres being thereby irritated, and ſucceſſively contracted in Coughing, the Contents of the *Trachea*, and of its *Veſiculæ* are thrown up into the mouth. Medicines proper for this uſe beſides Sulphur and preparations of it, are Artificial Balſams diſtill'd with Oyl of Turpentine, Tinctures and Syrups of Gumm Ammoniacum, Galbanum, Aſſa-fætida, Garlick, Leeks, and the like ſtrong ſmelling things; of which alſo Lohoch's and Eclegma's are prepar'd, and theſe indeed work both ways, ſo that partly by ſlipping down into the *Trachea*, and partly by entring the Lungs by the Circuit of the Blood, they ſet upon the Morbifick matter both before and behind, and ſo throw it forth with the greater force.

As to the Third Indication, *viz.* That the injur'd Conformation, or vitiated conſtitution of the Lungs may be reſtor'd or amended; ſuch things muſt be us'd which reſiſting putrefaction, mundify, conſolidate, dry and corroborate; for which ends alſo Medicines prepar'd of Sulphur, Balſamicks, and Traumaticks are proper: Hence ſome Empiricks ſucceſſfully preſcribe not only the fume of Sulphur, but likewiſe of Arſenick to be drawn through a Pipe or Funnel into the Lungs. Moreover for this reaſon it is, that the change of Habitation, as from Cities to a Country or

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Sulphureous Air, or travelling from one Country into another hotter, proves ſo notably beneficial.

So far of the method of Cure which ſeems to be proper for a deeper Cough, or a beginning Phthiſick: Now we muſt ſet down ſome Select Forms of Medicines according to each of thoſe Therapeutick Indications, which alſo according to the way us'd in a gentle Cough, free from a Phthiſick, we ſhall diſtribute into certain *Claſſes*, and thoſe are Mixtures, Linctus's, Lohoch's, Tinctures, Balſams, Troches, Lozenges, Powders, Pills, Decoctions, and diſtill'd Waters: We ſhall ſet before you ſome Examples of each of theſe, to which alſo may be added ſome of the forms of the Medicines preſcrib'd before for a beginning Cough, and not yet arriv'd to a Phthiſick.

1. *Magiſtral Mixtures and Syrups.*

TAke of our Syrup of Diaſulphur three Ounces, Water of Earthworms an Ounce, Tincture of Saffron two Drams: Mix them, take a ſpoonful going to Bed, and early in the Morning.

Take Syrup of the Juice of Ivy three Ounces, Snail water an Ounce, Flowers of Sulphur a Dram: Mix them by ſhaking them together, the Doſe is a ſpoonful Evenings and Mornings.

Take Tincture of Sulphur two Drams, Laudanum Tartariz'd a Dram, Syrup of the Juice of Ivy two Ounces, Cinnamon water two Drams: The Doſe is a ſpoonful at Bed time, and if the Perſon does not ſleep, towards Morning.

The Syrup of Diaſulphur.

TAke Sulphur prepar'd after our manner, half an Ounce, the beſt Canary Wine two pounds: Make a cloſe digeſtion in B. M. or in Sand for twenty eight hours: Which being done, take double refin'd Sugar two pounds, diſſolve it and boil it to a conſiſtency for Tablets in a little Water of Elder Flowers; then pour to this by little and little the Wine ting'd with the Sulphur whilſt warm; let it boil a little on the fire, ſcumming it, and ſtrain it through Woollen. You will have a moſt delicate Syrup of a Gold colour, and of great efficacy againſt the Cough and other affects of the Lungs (ſo there be no boyling heat of the Præcordia, nor Hectick Feaver) the Doſe is a ſpoonful Evenings and Mornings by it ſelf, or with other Pectorals.

Syrup

Syrup of Garlick.

TAke Cloves of Garlick Pill'd, and cut in ſlices, in number ten or twelve, Anniſeeds bruis'd, half an Ounce, Elecampane Roots ſlic'd three Drams, Licorice two Drams; let them have a cloſe and warm digeſtion, for two or three days in a pound and a half of ſpirit of Wine, put the clear and warm ſtraining into a ſilver-diſh; add of double refin'd Sugar a Pound and a half; the Diſh being put on hot Coals, let the liquor be ſet on fire, and whilſt it burns ſtir it; ſtrain it through Woollen, and keep it for uſe.

Syrup of Turnips.

TAke Turnips ſlic'd, and double refin'd Sugar, of each half a pound; put them in a glaz'd Pot, a lay of Turnips, and a lay of Sugar till it be full: Let the Pot, being cover'd with Paper, be put into an Oven to Bake with Bread; when it is taken out, preſs forth the Liquor, and keep it for uſe: The Doſe is a ſpoonful Mornings and Evenings.

Syrup of Snails.

TAke freſh Snails with their ſhells, in number Forty; cleanſe them with a Linnen Cloath, then each of them being run through with a Bodkin; let the Apertures of the ſhells be fill'd with Powder of Sugar Candy, and being put in a Linnen Bag, let them be hung up in a Cellar, and let a Glaſs Veſſel be ſet under them to receive the Syrup which will drop from them: The Doſe of this is a ſpoonful twice or thrice a day in a fit Vehicle, viz. *Aqua lactis, or ſome Pectoral Decoction.*

2. 3. *Linctus's and Eclegma's.*

TAke Conſerve of red Roſes three Ounces, Tincture of our Sulphur two Drams: Mix them by ſtirring them in a Glaſs Mortar; the Doſe is the quantity of a Nutmeg at Night, and early in the Morn-

Morning: Sometimes to allay a troubleſome Cough, you may add to this of Olibanum half a Dram, or a Dram.

Take Conſerve of red Roſes four Ounces, Flowers of Sulphur four Scruples, fine Oyl of Turpentine a Dram, Species of Fox Lungs three Drams, Syrup of the Juice of ground Ivy what ſuffices: Make a ſoft Lohoch to be taken after the ſame manner, viz. *Mornings and Evenings; alſo to be ſuck'd at other times with a ſtick of Licorice.*

Take Powder of Sugar Candy four Drams, Tincture of Sulphur two Drams: Mix them by ſtirring them in a Glaſs Mortar; let it be taken after the ſame manner.

Inſtead of the Tincture of Sulphur, you may put other Balſamick Tinctures, as of Balſam of Peru, of Opobalſamum, of the Gum of Ivy, Guaiacum, Amber, with many others, which may be mixt either in Conſerve of red Roſes, or with Conſerve of the Flowers of Colts-foot, or with Sugar Candy.

4. 5. Tinctures and Balſams of the ſame nature and compoſition as we have preſcrib'd before in a beginning Cough, are proper in a Phthiſick, only the Doſe muſt be a little larger.

Take of Tar an Ounce, Water of quick Lime thrice Cohobated, two pounds, diſtil them in Balneo to half: Then let the filtrated Liquor be drawn off in Balneo to the conſiſtency of honey; to which pour Tincture of Salt of Tartar half a pound: Let it digeſt in a cloſe Glaſs to extract the Tincture: The Doſe is from twenty drops to thirty, with a proper Vehicle. After the like manner a Tincture is gotten out of the black Oyl of Soot, Liquid Amber, Liquid Storax, and many other things.

Take of our Sulphur prepar'd with the addition of Myrrh, Aloes, and Olibanum in a ſubtriple quantity an Ounce: Let a Tincture be drawn off with Oyl of Turpentine, alſo with Rectified Spirit of Wine: The Doſe of this is from fifteen drops to twenty.

6. 7. 8. Troches, Tablets, and Powders, becauſe chiefly directed for the Cough, are in a manner of the ſame Nature and Compoſition with thoſe before preſcrib'd for that affect, when new taken; only that for drying and conſolidating the Lungs Sulphureous and Traumatick ingredients are requir'd in a greater proportion.

Take Powder of the Leaves of ground Ivy a Dram, Flowers of Sulphur two Drams, Sugar Penids a Dram and a half, Juice of Licorice diluted with Hyſſop-water, what ſuffices: Make Troches weighing half a Dram.

Take Powder of Yarrow bruis'd, and dry'd in the hot Sun, half a Dram, Flowers of Sulphur, Olibanum powdred, of each a Dram, Powder of red Roſes dry'd, half a Dram, Sugar diſſolv'd, and boil'd to a con-

conſiſtency for Tablets ſix Drams, Oyl of Anniſeeds a Scruple: Make Tablets weighing half a Dram. Take one thrice, or oftner in a day, and eſpecially at night, and early in the morning.

9. *Pills.*

Take Juice of ground Ivy Clarified in the Sun a pound, Flowers of Colts-foot dry'd, tops of Hyſſop, Sage, Penny-royal, of each a handful, Anniſeeds, Carraway-ſeeds, ſweet Fennel-ſeeds bruis'd, of each half an Ounce; diſtill them in Balneo Mariæ to half, then ſtrain it, and diſtill the ſtraining to the conſiſtency of Pills, adding Juice of Licorice half a Dram, Powder of Elecampane Roots, Flowers of Sulphur, of each three Drams, Flowers of Benzoin a Dram, Balſam of Peru, half a Dram, Tincture of Sulphur three Drams, Laudanum Tartariz'd two Drams: Make a Maſs, form it into ſmall Pills, and take three or four at night, and early in the Morning.

10. Decoctions, ſuch as we have before preſcrib'd for an obſtinate Cough, may be alſo properly taken in a beginning Phthiſick. In deſperate Caſes I have ſometimes very ſucceſsfully preſcrib'd the following Decoction to be taken twice or thrice a day, and alſo inſtead of ordinary drink.

Take Guaiacum four Ounces, China, Saſſafras, of each two Ounces, all the Saunders, of each an Ounce, ſhavings of Ivory and Hartſhorn, of each three Drams: Let them infuſe, and boil them in twelve pounds of fountain water to half, adding Licorice an Ounce, Raiſins ſton'd four Ounces; ſtrain it.

11. Diſtill'd Waters ſuch as before preſcrib'd, are alſo proper here, to which may be added the Water of *Solenander* drawn from Hogs Blood with Turpentine; alſo Balſamick Waters diſtill'd from Turpentine with Pectoral Ingredients.

Take Leaves of ground Ivy, white Horehound, Hyſſop and Penny-royal, of each three handfuls, Roots of Elecampane and Florentine Orice, of each two Ounces, Turpentine diſſolv'd with Oyl of Tartar four Ounces, Hyſſop-water four pounds, Malaga-wine two pounds, diſtil them in Sand; let all the Liquor be mixt, the Oyl being ſeparated: The Doſe is two or three ſpoonfuls twice a day, with a ſpoonful of the Syrup of the Juice of Ivy.

12. In the laſt place, We muſt here preſcribe Forms of Vapours and Fumes, the uſe of which ſometimes does more good in a Phthiſick, not paſt recovery than any other Remedies; and this

this becauſe they go to the Lungs it ſelf, and ſo by an immediate operation, Purge it, dry it, free it from Putrefaction, ſtrengthen it, and open its Ductus's.

Firſt, Therefore let a moiſt ſteam be made after this manner.

Take Leaves of Hyſſop, ground Ivy, white Hore-hound, of each two handfuls, Elecampane Roots two Ounces, Calamus Aromaticus, half an Ounce, Anniſeeds, Caraway-ſeeds, of each an Ounce, being ſlic'd and bruis'd, boil them in a ſufficient quantity of fountain water: Let the Vapour of the hot ſtrain'd Liquor be drawn into the Lungs through the hole of a Paper roul'd up Conically, or in the ſhape of a Funnel, uſe it Mornings and Evenings for a quarter of an hour.

2. A fumigation or dry Vapour is uſually made one while more gentle of meer Balſamicks, another while more ſtrong of Sulphureous, and ſometimes Arſenical ſubſtances.

Take Olibanum, white Amber, Benzoin of each two Drams, Gum Guaiacum, Balſam of Tolu, of each a Dram and a half, Powder of red Roſes, red Saunders, of each a Dram: Make a Powder to be ſtrew'd on burning Coals.

Take Gum of Ivy, Frankincenſe, of each two Drams, Flowers of Sulphur a Dram and a half, Maſtick a Dram; with a Solution of Gum Tragacanth, make Troches.

Take white Amber, Olibanum, of each two Drams, Auripigment prepar'd, half an Ounce, Storax Calamita, Laudanum of each a Dram and a half, with a ſufficient quantity of the Solution of Gum Tragacanth: Make Troches for fumigation.

Empiricks ordinarily preſcribe the ſmoak of Auripigment to be taken in a Pipe lighted, like Tobacco, and that ſometimes with good ſucceſs. Moreover its a practiſe with the vulgar to take bits of Cloth Painted with Auripigment (ſuch as ſerves for Hangings in Taverns) and ſhredding them very ſmall to kindle them in a Pipe like Tobacco, and ſo to draw the ſmoak into the Conſumptive Lungs for a Cure.

Now in the laſt place it remains for us to ſpeak of the great confirm'd Phthiſick which is commonly paſt Cure, and to adviſe what is to be done when the Lungs being very much vitiated and affected with one or more filthy Ulcers do not convey the Air and Blood according to their due Courſe, but defile, or corrupt the Maſs of the latter, by Miniſtring to it continually a ſtock of Putrified matter, ſo that a Hectick Feaver, and an Atrophia through want of nouriſhment ſeize the Diſeas'd with a great decay of all their faculties, and daily impairing their ſtrength, precipitate them to the Grave: The moſt certain ſign generally acknowledged of this Diſeaſe growing ſo deſperate, is a very trouble-

ſome pain, with an Inflammation in the Throat, for this affect argues a great Putrefaction of the Lungs, whence the corrupted Effluvia's exhaling, ſtick againſt the narrow paſſage of the Throat and there pierce, and vehemently irritate the tender Fibres in that part: In this caſe its in vain to attempt to Mundify the Lungs, and to cleanſe the Ulcer, and dry it; for all hot Medicines deſigned for thoſe ends, and proper enough in a beginning Phthiſick, are not to be endur'd when its confirm'd; becauſe augmenting the Inflammation of the Lungs they increaſe the Hectick Feaver, the Thirſt, Watchings, and other very troubleſome Symptoms, or ſtir them up a freſh: And indeed in ſuch a ſtate of this Diſeaſe, when we only propoſe to our ſelves to protract Life by helping towards a well-bearing of the Diſtemper, and to an eaſie death, thoſe Remedies are of chiefeſt uſe that moderate the fervour of the Blood, allay the heat of the Præcordia, reſtore the Spirits, and gently cheriſh them: Hence for Food, Aſſes Milk, alſo Water-gruel, Barly-Broaths, Cream of Barley; and for Drink, Ptiſans, Emulſions, Milk, Water diſtill'd with Snails and temperate Pectorals are uſually of greateſt ſucceſs. Let Syrups and Linctus's which lenify the Inflammation of the Throat and Lungs, and facilitate expectoration, be often or daily given, but eſpecially gentle Hypnoticks to procure a moderate reſt: I ſhall now give you ſome of the more Select Forms of each kind.

Take Barly half an Ounce, Candied Eringo Roots ſix Drams, parings of Apples a handful, Raiſins ſton'd two Ounces, Licorice three Drams, boil them in three Pounds of fountain water or two: Make a Ptiſan to quench thirſt; let it be taken three or four times a day, and if it agrees, let it be uſed inſtead of ordinary drink.

Take twenty Caudæ Gammorum, Candied Eringo Roots an Ounce, a Cruſt of White-bread, Raiſins ſton'd two Ounces, Licorice three Drams; boil them in three pounds of running Water, to two pounds: Strain it, take three or four Ounces thrice a day; after the ſame manner you may make a Decoction of Snails.

Take Snails half boil'd and ſlic'd three pounds, Leaves of ground Ivy ſix handfuls, Nutmegs ſlic'd, in number ſix; Pith of White-bread two pounds, Milk from the Cow eight pounds, diſtil it in an ordinary ſtill. After the ſame manner you may diſtil a Water è Caudis Gammorum: The Doſe is three or four Ounces thrice a day, ſweetning it with Saccharum Perlatum, or Sugar of Roſes.

Take Ears of green Wheat what ſuffices, diſtil them in a Roſe Still: Let the Perſon drink three or four Ounces thrice a day, ſweetning it, with Saccharum Perlatum.

Take Syrup of Meconium three Ounces, Water of green Wheat ſix Ounces: Mix them, let two or three ſpoonfuls be taken going to Bed every Night, or every other Night.

Take

Take Conſerve of the Flowers of Wild or Garden Mallows three Ounces, Lohoch de Pino two Ounces, Syrup of Jujubes two Ounces: Make a Lohoch, of which let a Dram and a half, or two Drams be often taken.

I ſhall now give Inſtances of ſome Patients which I have had in Cure in the foregoing Diſtempers: And Firſt, of one troubled with a ſimple Cough, which begins of it ſelf, and is free from the ſuſpicion of a Phthiſick.

Some years ſince I took care of the Health of a Student, who from his Childhood had been ſubject to a Cough, and was wont often to undergo ſevere fits of it, and of long continuance; he ſeem'd to be of a pretty ſtrong Conſtitution, only that his lungs, being originally weak, ſuffer'd much whenever his blood began to run into ſeroſities; in ſummer, as long as a free perſpiration laſted he was ſound enough, but ſpring and fall, when the blood changing its temper, either of its own accord or upon ſome ſlight occaſion offer'd falls into ſerous fluxions, he fell lightly into a Cough accompanied with abundance of thick ſpittle; yet this affect very often vaniſht by degrees within ſix or ſeven days, without any great adoe with Medicines, aſſoon as the maſs of blood was purg'd by the lungs: But if to the ſaid ſlight occaſion of this Diſeaſe other greater Cauſes were added, as chiefly the ſtoppage of the Pores, and errours in Diet, ſometimes a moſt violent and obſtinate Cough came upon him, not ſoon, nor eaſily yielding to Remedies, and threatning nothing leſs than a Phthiſick: Then growing ill indeed, for the firſt days he had light ſhiverings in his whole Body, and perceiv'd a Catarrh in his Larynx: Afterwards he was troubled with a frequent Coughing, accompanied with a thin ſpittle, together with a giddineſs, deadneſs of the ſenſes, and a dropping at the Noſe.

In this ſtate his beſt Remedy, and often try'd with good ſucceſs was to drink Sack ſomewhat freely, and as little of any other Liquor as might be; for by this means the Acidity and flowing of his Blood being ſuppreſt, and a more free perſpiration rais'd, he found himſelf very much eas'd, and ſometimes in a very ſhort ſpace grew well: Moreover going to Bed, and firſt in the Morning he us'd to take ſeven or eight drops of Tincture of Sulphur in a ſpoonful of Syrup of Violets, or of the Juice of ground Ivy, Or,

Take Conſerve of red Roſes four Ounces, Spirit of Turpentine two Drams: Mix them, the Doſe is the quantity of a Cheſnut Evenings and Mornings.

But if theſe Remedies, together with the Canary Antidote, and a thin Diet do not do, the Diſeaſe not being Cur'd by ſuch means, runs then to a great length, and following him ſharply for ſome

Weeks, and ſometimes Months, brings the Diſeas'd to a mighty leanneſs, and even to the brink of the Grave: For the Cough growing daily worſe and very troubleſome, hinders ſleep mightily, and interrupts it, his ſtrength languiſhes, his appetite is dejected, heat and drought preſs hard upon him: In the mean time the Spittle is daily increas'd, and caſt forth in a vaſt quantity; ſo that afterwards not only the Serum and dreggy Excrements of the Blood, but even the nutritive Juice, and the waſtings of the ſolid parts being continually pour'd on the Lungs, turn into corruption, which is Cough'd forth in abundance; but reſpiration grows difficult, the Limbs very weak, and the Fleſh conſumes very much.

When our Patient was lately ill in this manner, we preſcrib'd the following Method and Remedies, by the continued uſe of which he at length recovered: In the firſt place a thin Diet being ordered him, and Ale or Beer wholly forbidden, he took of the following Apozeme about four Ounces twice a day warm, and a little of it at other times cold, to quench his thirſt.

Take China Roots two Ounces, Sarzaparilla three Ounces, white and yellow Saunders, of each an Ounce, ſhavings of Ivory and Hartſhorn, of each three Drams: Infuſe them according to Art, and let them boil in eight pounds of fountain water to half, adding Raiſins of the Sun three Ounces, Licorice three Drams: Strain it, and let it be us'd for ordinary drink.

Take Tincture of Sulphur three Drams: Let him take from ſeven drops to ten going to reſt, and early in the Morning in a ſpoonful of Syrup of Violets, or of Syrup of the Juice of ground Ivy.

When by a long uſe of this Medicine he began to loath it, the following Eclegma was ordered in its ſtead.

Take Conſerve of red Roſes four Ounces, Spirit of Turpentine two Ounces: Mix them by bruiſing them together, the Doſe is about a Dram at the ſame hours.

Afterwards inſtead of this, the following Powder was ſometimes taken.

Take Powder of the Leaves of ground Ivy prepar'd in the Summer Sun three Ounces, Sugar Candy half an Ounce: Mix them, the Doſe is half a ſpoonful twice a day, with three Ounces of the following diſtill'd water.

Take Leaves of ground Ivy ſix handfuls, Hyſſop, white Hore-hound, of each four handfuls, the Lungs of a Lamb half boil'd and ſlic'd ſmall; pour to them of Poſſet-drink made with ſmall Ale eight pounds, diſtil it in common Organs: Let the whole Liquor be mingled, and when it is us'd, ſweeten it at pleaſure with Sugar Candy, or Syrup of Violets.

To appeaſe the almoſt continual toyl of Coughing, he ſwallowed now and then the following Troches, or a little extract of Licorice.

Take Species Diatragacanthi frigidi three Drams, Powder of the Seeds of Anniſe, Caraway, and ſweet Fennel, of each half a Dram, Flowers of Sulphur two Scruples, Flowers of Benzoïn a Scruple, extract of Licorice diluted with Hyſſop water what ſuffices: Make a Paſte, and form it into Troches. Or,

Take Species Diaireos, è Pulmone Vulpis, of each two Drams, Flowers of Sulphur, Roots of Elecampane, of each half a Dram, Oyl of Anniſeeds half a Scruple, Sugar diſſolv'd in a ſufficient quantity of Pennyroyal water, and boil'd to a conſiſtency for Tablets ſix Ounces: Make Tablets according to art, weighing half a Dram; let him take one as often as he pleaſes, ſwallowing it by little and little.

In the midſt of this Courſe, though he had a weak Pulſe, and was of a cold temperament, he was let Blood in the Arm: Beſides theſe Remedies, a great benefit accrued to him from the freſh Air, which he took daily either on Horſeback, or in a Chariot. For by this, he firſt began to recover his Appetite, Digeſtion, and Sleep, which afterwards were followed by degrees with an abatement of the other Symptoms, ſo that at length he perfectly recover'd: He has us'd a method like to this, and with the like ſucceſs, as often as till this time he has been troubled with a tedious and ſtubborn Cough; and now though he be wholly free from that diſtemper, yet he is forc'd carefully to avoid all occaſions by which the Pores are ſtop'd; or, by which a Fuſion or Precipitation of the Blood into Seroſities is rais'd, ſuch are chiefly his going by Water on the *Thames*, and his drinking Acid Liquors, as Cider, French, or Rheniſh Wines.

The foregoing Relation gives you a Type, and way of Curing a Cough, caus'd through the fault of the Blood, and not reaching the limits of a Phthiſick: Now follows another which Illuſtrates the nature of the ſame affect, when it proceeds chiefly from the Nervous Liquor.

A Boy about ten years of Age, ſubject from his Infancy to be often troubled with a Cough, has undergone of late years ſome great and tedious fits of that Diſtemper, that is to ſay, he is wont at times to fall ill of a hollow and ſhrill ſounding Cough without Spitting, which almoſt continually toyls him Day and Night, and ſo tormenting him for many Days, nay and Weeks, it brings him to a very great weakneſs: Afterwards the Courſe of the Diſeaſe being paſs'd over, (which happens not till the ſtore of Morbid matter be conſum'd) in a ſhort time he becomes well enough again, and as free as may be from any Diſtemper of the Thorax, till the Morbifick matter (as it ſeems) being heap'd together

gether again to a fullneſs, without any evident cauſe the ſame affect returns, and acts over its Tragedy again with its wonted ſeverity: About the time it firſt ſeizes, the Cough uſually troubles him only Mornings and Evenings; afterwards the Diſtemper growing worſe by degrees, he often Coughs whole Days and Nights almoſt without ceaſing, and if at any time Sleep either happening of it ſelf, or being procur'd by Anodines, gives ſome truce, preſently upon his waking, a more violent fit of Coughing comes upon him: After this manner Coughing very frequently aud moſt vehemently without Spitting he continues ill for three Weeks or a Month, till he be brought to a mighty leanneſs, and an extream weakneſs; and then the Diſtemper remits by degrees, ſo that he Coughs ſomewhat more ſeldom, and Sleeps indifferently, ſhortly afterwards growing very hungry, he ſoon becomes full of Fleſh, and vigorous, and recovers in a ſhort time his former Health. Theſe fits ſeldom trouble him in the Summer, but in the reſt of the year they return ſometimes three or four times, and put the Patient in great danger of his Life. The cauſe of this Diſtemper is not the ſame as of a vulgar Cough, in which a Serous humour diſtilling either ſlowly, or in a plentiful manner from the Veſſels of the Trachæa, or of the Lungs into the Veſiculæ or little Pipes of the Trachea induce the Symptoms that attend that affect; for it plainly appears that in this the Ductus's of the Aſpera Arteria are wholly free from any Serum or thick humour, becauſe the Cough which is always deep and ſonorous, throws forth nothing: Nor does this Cough ariſe from the Blood forc'd into the Membranes of the Lungs, becauſe in this there is no Feaver, Thirſt, nor Pain, as in a Peripneumonia; neither does its Morbifick matter ſeem to ſtick to the Nerves or Muſcles ordain'd for breathing, becauſe then beſides the Gough, Aſthmatick or Convulſive fits, with a ſenſe of choaking would ſometimes follow, which do not happen to our Patient.

I gueſs therefore that a certain Serous and ſharp matter, full of a Scorbutick taint, falling from the Head by the conveyance of the Nerves, enters the Nervous Fibres and Membranes of the Lungs, or of the Trachæa, and throughly cleaving to them, increaſes by degrees to a fulneſs, and at length growing angry and turgid, through its perpetual irritation creates ſo troubleſome a Cough.

When this affect once ſeizes, it is wont to hold on its Courſe for a very long time, in deſpite of all Remedies: Pectoral Medicines commonly ſo called, as Syrups, Linctus's, Eclegma's did little or nothing towards the Cure of this Diſeaſe, though ſometimes I have thought good to uſe them for making the Lungs ſlippery, and to moiſten them, leſt hap'ly they ſhould be endanger-

red

red to be torn aſunder, by the violence of the Cough, and their Veſſels to be broken; for ſometimes in a violent fit, our Patient uſed to Cough forth a little Blood, though no thick Spittle.

A gentle Purge in the beginning of this Diſeaſe has often done good, as alſo in its declination. Opening and Diuretick Medicines always work a good effect, of both which he uſes what ſuffices throughout the whole Courſe of his Diſtemper, for his ordinary drink. Evenings and Mornings he takes ſome drops of the Tincture of Sulphur, with the Water of Snails lacteated: I was forc'd ſometimes to give late at Night a Doſe of the mixture of Diacodium, or of Liquid Laudanum: In two of his fits he was Blooded, from which he receiv'd no good.

In the laſt fit, which beginning about the Autumnal Equinox, paſs'd over ſomewhat more lightly and gently, the following method of Cure was obſerv'd.

Firſt of all, this Cathartick was given him, and repeated after four days.

Take Calamelanos half a Scruple, Roſin of Jalup four Grains: Mix them, make a Powder, let it be taken in a ſpoonful of Syrup of Violets.

Take China Roots ſlic'd a Dram, Graſs Roots three Ounces, Chervil Roots an Ounce, Candied Eringo's ſix Drams, ſhavings of Ivory and Hartſhorn, of each three Drams, Raiſins of the Sun ſton'd, three Ounces: Boil it in three pounds of fountain water, to two pounds, ſtrain it, and let it be us'd for ordinary drink.

Take Syrup of Jujubes two Ounces, Diacodium an Ounce, Spirit of Sal Armoniack with Gum Ammoniacum a Dram: Mix them, the Doſe is a ſpoonful going to Bed, and early in the Morning: He was much reliev'd by this Remedy, though he took it only every other, or every third day; and ſometimes in its ſtead, a Doſe of the Tincture of Sulphur, with Syrup of Violets was given him.

The Diſeaſe declining, he was purg'd twice, and afterwards recovering by degrees, he grew well enough within a fortnight: But finding him ſubject not only to frequent relapſes of Coughing, but that each fit when it came upon him was irreſiſtible, and that its ſtay notwithſtanding any uſe of Remedies was of long continuance, and threatned nothing leſs than a Conſumption: I advis'd him that as well for preſervation, and in caſe the affect return'd, as for Curing it, he ſhould Travel to a Region hotter than ours. He took my advice, and about the beginning of *November* went to *Montpellier*, where paſſing half a year, he had only two ſlight touches of illneſs: Since being return'd to *England*, he enjoys, thanks be to God, a perfect Health, quite free from his Cough.

CHAP.

CHAP. II.

Inſtructions and Preſcripts for the Cure of Spitting Blood.

THe Indications for Curing a Spitting Blood, are chiefly theſe two, *viz.* Firſt, preſently to moderate and ſtay the Flux of Blood: And then in the Second place to heal the diſſolution of Unity, without leaving a Conſumptive Putrefaction in the Lungs.

In reference to the Firſt, Theſe two things are chiefly to be procur'd: Firſt, That the Blood do not flow to the part affected: Secondly, That withal the Aperture of the Veſſel be ſome way clos'd.

1. To keep the Blood from flowing to the part affected, many intentions of Curing muſt be ſet upon together, *viz.* We muſt leſſen the quantity of Blood, moderate its fervent boiling, alter its ill temper, retard its motion, or divert it another way: For which ends Blooding, Ligatures and Frictions moſt commonly do well. Moreover, Julapes, Decoctions, Emulſions, and Juicy expreſſions of Herbs ought to be given, and likewiſe moderate Hypnoticks; eſpecially Diacodiats are taken with good ſucceſs: For theſe by putting a ſtay to the motion of the Heart, allay the fervour of the Blood.

2. To cloſe the Aperture of the Veſſel, Aſtringent Remedies, and Agglutinatives are moſt proper: The chief of theſe are uſually given in the Form of a *Linctus*, ſo that ſome of its Particles in ſwallowing, falling on the *Aſpera Arteria* may more immediately communicate their vertue to the part affected. But the way of this Operation ſeems to be of no great moment, becauſe the Efficacy of the Medicines reaches chiefly, and in a manner only by the way of the Blood to the Root of the Diſeaſe: Wherefore not only *Lohoch's*, but likewiſe Decoctions, Powders and Pills of Traumatick, and Balſamick Ingredients are ſucceſsfully preſcrib'd.

The Second Indication, which is for preſervation, having regard to the Cure of the diſſolution of Unity, without leaving any blemiſh in the Lungs, ought to provide againſt two ſorts of evils, *viz.* That the Spitting Blood (to which the Perſons affected will be always ſubject) does not return at times; and that the

the Conſumption, which threatens all thoſe that Spit Blood, does not follow it: For which ends in order to the prevention of this Diſeaſe, we muſt take an aſſiduous care of, or uſe a conſtant method of Cure to the Blood and Lungs.

1. As to the Blood, its Maſs ought always to be kept in a due quantity, a juſt temper, and a gentle and continued motion: Hence leſt it abound too much, or being affected with an evil temperament, grows turgid, or depoſes impure dregs in the Breſt, we muſt ſometimes uſe Bleeding, and a gentle Purge; an exact Form of Diet is always neceſſary. Moreover, drinking of Aſſes Milk, or of Mineral Waters contribute ſometimes egregiouſly to the purifying and ſweetning of the Blood.

Again, Decoctions, Diſtill'd Waters, Juices of Herbs, which take away the Dyſcraſies of the Blood, and derive the *Serum* and other Impurities from the Lungs, and carry them forth by Sweat or Urine, muſt be diligently taken: Iſſues alſo mightily conduce for this end.

2. Nor muſt leſs care be taken of the Lungs themſelves, that their whole frame, and eſpecially the place affected, be preſerv'd in a due Conformation, and right Tone: Hence all violent motion, by which Unity is farther diſſolv'd, or its reſtauration hindred, is carefully to be avoided. Let the Perſon live in a clear and brisk Air, though it muſt not be too ſharp and piercing. Let him abſtain from groſs Food, long Sleeps, large Suppers, and other errours in Diet, which cauſe a Repletion, or Obſtruction in the *Præcordia*: Beſides this, let Remedies be us'd, which are ſaid to Cure the Lungs, by a peculiar or certain Specifick Vertue.

Having given you the method of Curing Blood Spitting, I ſhall now ſet down ſome Select Forms of Medicines, anſwering to each of the Therapeutick Indications, and to the various intentions of Curing that belong to them: And we juſtly give the precedency to thoſe which encountring the moſt urgent Symptome, preſently ſtop the flowing forth of Blood, caſt out of the Lungs by a Cough, or otherwiſe: In the Firſt rank of theſe Medicines, we place thoſe which hinder the Blood from flowing to the part affected, and have a certain Aſtringency, together with an Agglutinative Vertue, by which the Aperture of the Veſſel is clos'd; and after a Glyſter and Blooding (unleſs the weakneſs of the Pulſe, and a deficiency of heat forbid it) they are preſently given in the form of a Julape, Decoction, Emulſion, Juicy Expreſſion, Powder, Pills and Lohochs: I ſhall give you ſome of the choiceſt and moſt efficacious preſcripts of each of theſe, as alſo of Hypnoticks, which nevertheleſs muſt not be us'd at random, and indifferently, but every of them methodically and ſeaſonably, accor-

ding to the various Conſtitution of the Patient, and Nature of the Diſeaſe, as a prudent Phyſician ſhall direct.

1. *Julapes and diſtill'd Waters.*

TAke the Waters of Purſlain and red Poppies, of each ſix Ounces, Dragons Blood finely Powdred half a Dram, Syrup of red Poppies two Ounces, Spirit of Vitriol of Mars, half a Scruple: Mix them, the Doſe is three Ounces, repeating it within five or ſix hours.

Take Plantain water a pound, the Gums Tragacanth and Arabick Powdred, of each half a Dram; mingle them and diſſolve them, then add Syrup of dry'd Roſes, an Ounce and a half: Make a Julape, the Doſe is three or four Ounces every third or fourth hour.

Take the Waters of Oak-buds, red Roſes, and Nymphæa, of each four Ounces, Blood-ſtone very finely Powdred, Bole Armeniack Powdred, of each half a Dram, Syrup of Nymphæa two Ounces: Mingle them, the Doſe is three or four Ounces, three or four times a day.

Take of the Dew or inſipid Phlegm of Vitriol a pound, Syrup of Myrtles two Ounces: Mix them, the Doſe is two or three Ounces, often in the day, or in the night.

Take Cypreſs tops eight handfuls, Willow Leaves or Flowers ſix handfuls, Roots of the greater Comphrey and Nymphæa, of each half a pound, Balauſtia two handfuls, all being ſlic'd ſmall together, pour to them of freſh Milk eight pounds, diſtil them in Common Organs: The Doſe is three or four Ounces, thrice or oftner in a day.

Take of this diſtill'd water, and of Plantain water, of each half a pound, the Gums Tragacanth and Arabick, of each two Drams: Diſſolve them, the Doſe is three Ounces every third hour.

The following Mixture is preſcrib'd by *Frederick Deckers*, to be taken a Spoonful at a time, and ſeems to be a good Medicine.

Take Plantain water two Ounces, Cinnamon two Drams, Confection of Hyacinth a Dram and a half, diſtill'd Vinegar half an Ounce, red Coral prepar'd half a Dram, Balauſtia, Dragons Blood, of each half a Scruple, Laudanum Opiatum three Grains, Syrup of Myrtles an Ounce: Mingle them.

Take the Waters of Plantain, red Roſes and Purſlain, of each four Ounces, Blood-ſtone and Dragons Blood reduc'd into a fine Powder, of each half a Dram, Sugar Candy ſix Drams: Make a Julape.

A Solution of common Vitriol, or of Vitriol of Mars made in fountain water, and apply'd to a Wound with a rag, excellently ſtops all Fluxes of Blood, but it is not proper to be given inwardly.

2. *Decoctions, Tinctures, and Emulſions.*

TAke Leaves of Blood-wort, Perwincle, Mouſ-ear, Plantain, Wood-ſorrel, both ſorts of Daiſies of each a handful: Flowers of red Roſes half a handful, Barley half an Ounce, Raiſins two Ounces, boil them in three pounds of Water, in which red hot Iron has been quench'd, till it comes to two pounds; add to the ſtraining Syrup of St. Johns wort two Ounces, or of Mouſ-ear: Make an Apozeme, the Doſe is four or ſix Ounces thrice a day.

Take Leaves of St. Johns wort, Roots and Leaves of Tormentil, great Burnet, Meadow-ſweet, of each a handful, Seeds of Purſlane, Plantain, and Sorrel, of each a Dram, Conſerve of red Roſes half a pound, fountain water four pounds: Let them boil cloſe in B. M. for twelve hours; to the ſtraining, add Spirit of Vitriol of Mars, half a Scruple, take it after the ſame manner.

Take Barley water with madder Roots boil'd in it, a pound and a half: Put into it, when grown pretty cold, of red Roſe Leaves a handful: Add Spirit of Vitriol a Scruple, let there be a cloſe and warm infuſion for three hours: Make a Tincture, to the ſtraining add Syrup of the Juice of St. Johns wort, an Ounce and a half: Take three or four Ounces, thrice or four times in a day.

Take of the Decoction of the Roots of freſh Nettles, a pound and a half, Seeds of white Poppies, and of Henbane, of each two Drams, Melon ſeeds pill'd ſix Drams: Make an Emulſion according to Art, ſweetned with Sugar Penids: The Doſe is three Ounces, three or four times a day.

3. *Juices of Herbs, and Juicy Expreſſions.*

TAke Juice of Plantain Leaves half a pound: Let two or three Drams be taken thrice a day, with three Ounces of the diſtill'd Water above written, and ſweeten it at pleaſure.

Take Leaves of freſh Nettles, Plantain, the leſſer Daiſy, of each three handfuls; being bruis'd together, pour to them of Purſlain water ſix Drams: Wring it forth hard, take it as the former.

4. Powders and Pills.

TAke Powder of Blood-ſtone, of Dragons Blood ground on a Marble with Roſe-water, and of Pearl, of each a Dram, Bole Armeniack, Terra Lemnia, of each half a Dram, Troches of Winter Cherries two Drams: Make a Powder, divide it into twelve parts; let one part be taken thrice a day with the diſtill'd water above written.

Take of the Seeds of Henbane, and white Poppies, of each ten Drams, Terra Sigillata, red Coral, of each five Drams, Sugar of Roſes three Ounces: Make a Powder, the Doſe is a Dram Morning and Evening. This Compoſition brought into a ſoft Conſiſtency with ſome proper Syrup, is call'd Helidæus's *Electuary, ſo Famous heretofore in* Germany.

The foreſaid Powders may alſo be made into convenient Pills and Tablets, by adding the Solution of Tragacanth, or ſome fit Syrup.

The ſpungy Excreſcency uſually growing to the fruit of the Dog-Roſe Tree, made into Powder, and given twice a day to the quantity of half a Dram, is a very good Remedy in ſpitting Blood.

Take Yarrow bruis'd and dry'd in the Summer Sun, what you think good: Make it into a fine Powder, and keep it in a Glaſs for Uſe: The Doſe is from half a Dram to a Dram, twice a day in a fit Vehicle.

The Powder of Julius Cæſar Scaliger, or rather of Serapion is mightily commended: The Doſe is four Drams; twice or thrice a day.

5. Lohoch's and Electuaries.

TAke Conſerve of red Roſes, and of the Dog-Roſe, of each two Ounces, Powder of the Seeds of the white Poppy, and of Henbane, of each two Drams, Species Diatragacanthi frigidi, a Dram and a half, Blood-ſtone, Sanguis Draconis prepar'd, of each half a Dram, Syrup of red Poppies what ſuffices: Make an Electuary, let the quantity of a Cheſnut be taken Evenings and Mornings, and at other times ſuck it with a ſtick of Licorice.

Take Conſerve of the Flowers of great Cemphrey, and of Water-Lillies, of each an Ounce and a half, Troches of Winter Cherries, and Diatragacanthum frigidum, of each a Dram and a half, Syrup of Jujubes what ſuffices; Make a ſoft Lohoch, of which take often with a ſtick of Licorice.

Take

Take of the White of an Egg well beaten two Drams, Lucatellus's Balſam half an Ounce, Troches of Winter Cherries two Drams, Syrup of red Poppies what ſuffices: Make a ſoft Lohoch, take the quantity of a Cheſnut Morning and Evening.

The Second Indication being for preſervation, ſuggeſts to us thoſe Remedies which keeping the Blood in a juſt temper, and the Lungs in a due Conformation, provide againſt a relapſe of Spitting Blood, and an enſuing Conſumption; ſuch as regard the Blood are either gentle Evacuatives by Seige, Urine, and Sweat, or meer Alteratives. Every one of theſe are wont to be preſcrib'd either in the Form of a Drink, Powder, Electuary or Pills: We ſhall ſet down ſome Select Forms of ſome of the chief of them.

1. As to Evacuatives, a gentle Purge may ſometimes be ordered after this manner.

Take of the beſt Sena three Drams, Caſſia bruis'd with the Fiſtula an Ounce, Tamarinds three Drams, Coriander-ſeeds a Dram and a half: Boil them in a ſufficient quantity of fountain water to ſix Ounces, to the ſtraining add Syrup of Cichory with Rhubarb an Ounce, Clarify it with the White of an Egg. Or,

Take Gereons Decoction of Senna four Ounces, Purging Syrup of Apples an Ounce: Mix them, and make a Potion.

For preſerving the Blood in a good temper, and that its dreggy Excrements deriv'd from the Lungs, may be continually diſcharg'd by Sweat and Urine, the following Alteratives, or ſome of them muſt be conſtantly taken; which being alſo of a healing Nature, relieve Lungs that are infirm, or diſſolv'd in their Unity.

For ordinary Drink, let it be pure Water, eſpecially in a hot Conſtitution, or water a little ting'd with Claret Wine: Thoſe with whom this Drink does not agree, may uſe with as good ſucceſs a *Bochet of China and Sarſa, with the ſhavings of Ivory, Hartſhorn, and white Saunders in it, or ſmall Beer, or Ale, with the Leaves of Harts Tongue, Oak of Hieruſalem, and the like infus'd in it.*

Let Pectoral Decoctions, or Hydromels with temperate Traumatick Herbs be taken twice or thrice a day, to ſix or ſeven Ounces.

Take Roots of freſh Nettles, and Chervil, of each an Ounce, Leaves of Harts Tongue, Speedwel, Mouſ-ear, Ground Ivy, St. John's-wort, of each a handful: Boil them in three pounds of fountain water to two pounds, adding Raiſins ſton'd an Ounce and a half, Licorice two Drams; to the ſtraining add Syrupus Byzantinus two Ounces, Clarifie it with the White of an Egg: Make an Apozem to be taken to four or ſix Ounces twice or thrice a day for a Month.

In

In a cold or Phlegmatick Conſtitution, the Licorice and Raiſins being omitted with the Syrup, add towards the end two Ounces of the beſt Clarified Honey; ſtrain it, and keep it for uſe: The Doſe is the ſame as the former.

Let theſe things ſometimes be taken betwixt whiles with a diſtill'd water appropriated to the ſame end; which alſo may be more frequently taken by ſome Perſons, to whom Apozems are nauſeous and loathſome.

Take Cypreſs Tops, Leaves of ground Ivy, of each ſix handfuls, Snails half boil'd a pound and a half, All the Saunders bruis'd, of each an Ounce: Being ſlic'd and bruis'd, pour to them of new Milk eight pounds, diſtil it with common Organs: The Doſe is three or four Ounces with a ſpoonful of Syrup of the Juice of ground Ivy twice a day.

2. In reſpect of the Lungs, *viz.* that the Union of its parts, and the due Conformation of the whole may be preſerv'd without any obſtruction, or opening of its Veſſels, temperate Balſamicks are of chiefeſt uſe: For this end *Lucatellus Balſam* is preſcrib'd even by the vulgar to be taken conſtantly, and for a long time by ſuch as Spit Blood. Chymiſts and ſome famous Women cry up above all things a Balſamick Oyl drawn by diſtillation, which they call *Mother of Balſam.*

I ſhall now illuſtrate this Method of Cure by a Story.

A famed young man falling from a Scorbutick Cachexia into a Palſey, and for the Cure of this Diſeaſe, having try'd Remedies not only great, but likewiſe diſproportionate to his Blood and Spirits, *viz.* Salivation, and the uſe of hot Baths, happened to be ſeiz'd with a Spitting of Blood, and its fits (of all I ever knew that were not preſently mortal) ſeem'd the moſt dreadful.

The Firſt appearance of this Blood Spitting was after the operation of *Hews*'s Powder, by which having for ſome time undergone a Salivation, though without Curing his Palſey, he was brought to a great weakneſs: Then being afflicted with a Catarrh, and a very troubleſome Cough, he began to caſt forth a diſcoloured Spittle, and ſometimes ting'd with Blood, ſometimes ſprinkled with it. But this Diſeaſe being mild at Firſt, ſoon vaniſh'd by the uſe of Medicines, and afterwards the Perſon going into the Country, and breathing a purer Air, grew better, and in a while ſeeming to be ſound enough in his Breſt, he went to *Bath* to Cure his Palſey: Where Bathing every day for ſix Weeks in the hot waters, he got his Cough again, and ſoon after fell into a terrible Spitting of Blood, ſo that in twenty four hours ſpace Coughing up Blood almoſt continually, and in a large meaſure, he threw forth a vaſt quantity.

Going

Going to ſee him the Firſt time in this Condition, proviſion being made for the whole, I preſently ordered Bleeding for Revulſion, though after its Adminiſtration (both then and ever after) his Blood Spitting either return'd a freſh, or was provok'd more by it. Moreover I gave Julapes, Lohoch's, Decoctions, and even Hypnoticks, which doing little or no good: I ordered Ligatures about his Arms and Thighs, which firſt of all gave a check to the Tyranny of this Diſeaſe: And as now and then the Evil burſt forth again, I perſwaded him at length that forbearing the uſe of Beer, he ſhould drink conſtantly a Decoction of Sarſa and China with Pectorals: By the almoſt continued uſe of this, obſerving likewiſe an exact Form of Diet, and abſtaining wholly from Wine, hot Aliments, and Salt and Sugar, he had his health well enough for above two years.

But afterwards being very much heated in a Crowd, he fell again into a terrible Spitting of Blood: A Phyſician being call'd, he was preſently Blooded in his Arm, after which his Blood Spitting became more violent; and when on the Second and Third days after he was Blooded again, the Evil encreas'd upon him each time: At length Ligatures being us'd (as before) and a Pectoral Decoction, and a Lohoch carefully taken, the Diſeaſe preſently abated, and in a ſhort time wholly ceas'd: Nevertheleſs he continued the uſe of his Pectoral Decoction, and thin Diet, *viz.* without any Fleſh above ſix Weeks, and thereby obtained truce from his Enemy for three years: And when afterwards ſometimes after drinking Wine, or too plentiful a Diet, the Blood growing turgid, began to burſt forth of the Lungs, preſently by the Ligatures, together with the uſe of the Decoction and Linctus, and the thin Diet, the force of it was always allay'd.

Nevertheleſs he became not ſo ſecure, but was forc'd to keep in a manner always watch and ward againſt that lurking Enemy: For not long ſince through the Diſtemper of the Seaſon, he was ſeiz'd with a very troubleſome Catarrh, accompanied with a Cough, and much Spittle which was now and then Bloody, and then the former Medicines did not do: Whereupon of his own head he betook himſelf to new things; and Firſt of all he took Evenings and Mornings a ſpoonful of the Syrup of the Juice of ground Ivy, and found thereby great good; but that Syrup, by reaſon of the Sugar, growing in a ſhort time loathſome to him, he took twice a day in a ſpoonful of ſome Liquor to half a Dram, or a Dram of the Powder of that Herb well prepar'd; which Remedy being us'd a long time, he became much better as to his Catarrh and Cough, but his Blood Spitting breaking forth now and then, though it were in a ſmall quantity, he chang'd his Medicine

dicine again; and took twice a day a Powder of the Tops, and especially of the hairy Excreſcencies of the ſweet Bryar Tree: Which Medicine alone, a certain Phyſician formerly renown'd for the Cure of Spitting Blood, had us'd with great ſucceſs: Nor did our Patient receive a leſs proſperous effect from that Remedy: For by it he preſently got wholly free from his Cough, Catarrh, and Blood Spitting, and ſo continued for a very long time, till at length thinking this Diſeaſe of his Breſt wholly conquer'd, and therefore to be ſlighted, he took up arms againſt the other more ancient, *viz.* the Palſey. Wherefore whilſt neglecting his Spitting Blood, he took daily to overcome that Diſtemper, a large Doſe of hot Medicines, *viz.* Magiſtral waters diſtill'd with Wine, Spirit of Hartſhorn, of Sal Armoniack, Aromatick Powders and Confections, and indulg'd himſelf likewiſe to a more plentiful Diet, drinking Ale and Wine moderately, the roaring Lion which ſeem'd before a ſleep, rous'd himſelf again, *viz.* he had not long continued that Antiparalitick Method, but the Blood Spitting return'd with a very great violence, ſo that in the ſpace of twenty four hours, he Cough'd forth above three pounds of frothy Blood; and afterwards when a Phyſician being call'd, he was preſently Ordered to be Let Blood, after bleeding the Blood Spitting beginning to be abated (as it was always wont before) was provok'd a freſh: Which nevertheleſs after the Application of the Ligatures, and the diligent taking of the Linctus and Pectoral Decoction, was preſently mitigated, and in a ſhort time wholly ceas'd. And when afterwards he had us'd above Three Months the Pectoral Decoction, and an entirely thin Diet, *viz.* without Fleſh, and of meer Herbs, Corn, and Milk Meats, he recovered in a ſhort time his former health, and now lives in that ſtate, triumphing over that cruel Diſeaſe.

This Perſon always found the uſe of the Pectoral Decoction to do him good: Wherefore though he chang'd now and then his other Medicines, he always retain'd the ſame Compoſition of that; and recommended it to many other Perſons ſeiz'd with a Blood Spitting with ſucceſs.

The Form of the Preſcript is thus.

Take all the Saunders, of each ſix Drams, Infuſe them for twelve hours in ſeven pounds of fountain water, then let it boil till a third part be waſted, after add of the Leaves of Coltsfoot, Maiden hair, Mouſ-ear, Speedwel, Flowers of St. John's-wort, of each two handfuls, ſweet Fennel-ſeeds ſix Drams, Licorice ſlit half an Ounce, Raiſins ſton'd half a pound, boil them to four pounds; then ſtrain it, and uſe it for your ordinary drink.

Moreover, when the Blood Spitting was upon him, or was coming, he took thrice, or oftner in a day the quantity of a Nutmeg of the following

following Electuary, drinking after it seven spoonfuls of the Julape.

Take Conserve of red Roses three Ounces, Conserve of Hipps and Comphrey, of each an Ounce and a half, Dragons Blood a Dram, Species of Hyacinth two Scruples, red Coral a Dram, with a sufficient quantity of Syrup of red Poppies, Mix them, and make a soft Electuary, take at Night, and early in the Morning a Dram and a half, drinking after it a draught of the following Julape; at other times let him take it with a stick of Licorice.

Take of the Waters of Plantain, and of the Spawn of Frogs, of each six Drams, Syrup of Coral, and of dry'd Roses, of each an Ounce, Dragons Blood two Scruples: Mix them, make a Julape.

CHAP. III.

Instructions and Prescripts for Curing a Peripneumonia.

THe Peripneumonia is an Inflammation of the Lungs with an Acute Feaver, a Cough, and a difficulty of Breathing; it is caus'd by a rushing of the Blood into the Ductus's of the Lungs, and its being there inflam'd and obstructed.

The Primary Indication in order to the Cure of a Peripneumonia is, that the Blood forc'd into the Vessels of the Lungs, and causing there an Obstruction with an Inflammation, be thence discust, and restor'd to its former Circulation; which if it may not be done, the Second Indication will be, that that matter be duly Concocted or Suppurated, and with all expedition voided by Spittle.

1. Whilst the former Indication holds good, the Intentions of Curing will be these following: In the First place, That the excessive current of the Blood to the part affected be cut off, or some way hindred. *Secondly*, We must endeavour that the matter stagnating in the Lungs, or extravasated, be suck'd up again by the Veins into the rest of the Mass, and restor'd to its Circulation: Which the better to effect. *Thirdly*, The Blood must be freed of its clammines, or viscous nature, whereby its fluidity is hindred. And *Fourthly*, We must obviate by fit Remedies those Symptoms that are very pressing: *viz.* the Feaver, Cough, Watch-

ings, and difficulty of Breathing: But if notwithstanding all this, the other Indication must be pursued, we must add to the Remedies before mentioned, such as they commonly call Maturating and Expectorating Medicines.

1. To satisfy the First and Second Intentions together, Blooding is requisite almost in every Peripneumonia, nay sometimes it ought to be often repeated: For the Vessels being emptied of Blood, they do not only withdraw the matter which maintains the Disease, but likewise drink up again what was forc'd into the part affected: Wherefore if the strength holds, and the Pulse be of a sufficient vigour, its good to bleed freely at the very beginning, but otherwise you must do it in a moderate quantity, and repeat it now and then as occasion requires: In this Distemper the Vein should always be open'd with a large Orifice, and the Blood should not only Issue forth in a full stream, but its running should be continued; for otherwise if in the midst of bleeding, whilst the vitiated Blood flows forth, the Orifice be stop'd with the Finger, (as some are wont to do to prevent fainting) when its open'd again, a pretty good Blood will Issue forth next, the vitiated Blood, if any such be remaining, being fallen back, and not presently returning to the Orifice. Besides Bleeding, many other Remedies are here to be us'd, *viz.* such as repress the turgid motion of the Blood, and empty its Ductus's, whereby the Morbifick matter may be drank up again: Wherefore a very thin Diet is prescrib'd, consisting almost meerly of Barley and Oat-meats. And though Catharticks are wholly forbidden, because they strongly exagitate the Blood, and force it more violently into the part affected: Nevertheless Glysters ought to be daily Administred which gently ease the Belly, and draw the dreggy Excrements of the Blood downwards. Moreover qualifying Julapes and Apozemes, which allay the fervour of the Blood, and pleasantly lead off its superfluous Serosities, and likewise gently open the passages of the Breast, are taken with good effect.

The Third Intention of Curing which has regard to the takeing away of the obstructing clammineſs, or viscous nature of the Blood, is perform'd wholly by those Remedies which loosen its over-close Texture, and dissolve the Combinations of its Salts. And truly those Remedies which Reason and Analogy might dictate in this respect, are us'd even at this time after a long experience: For Powders of Shells, the Tusk of a Boar, the Jaw-bone of a Pike, and other things endow'd with an Alkalisate Salt; also Sal Prunella are prescrib'd by all Practitioners, both Ancient and modern. I have known Spirit of Sal Armoniack, and of Hartshorn, to have done great good in this Disease: And for the same Reason it is (*viz.* Because of the good effect of the

Volatile

Volatile Salt) that an Infuſion of Horſe-dung, though a vulgar Remedy, has often given great relief.

Fourthly, As to the Symptoms and their Cures, a great many Remedies appropriated to theſe, are Coincident with the former: For the ſame Julapes and Apozemes which appeaſe the fervour of the Blood, and alſo reſtore the Animal Spirits, are in moſt common uſe againſt the Feaver: To which alſo in reſpect of the Cough, and the difficulty of Breathing, temperate Pectorals are joyn'd: The greateſt difficulty is, what muſt be given againſt want of ſleep, if at any time the Perſon be very much moleſted by it: For Opiats adding to the prejudice of Reſpiration, which is under ſome ſtreſs from the beginning of this Diſeaſe, may ſcarce be taken with ſafety, nay ſometimes they become pernicious: Wherefore Laudanum's, and the ſtronger preparations of Opium muſt be utterly avoided in a Peripneumonia; though in the mean time Anodines, and the more gentle Hypnoticks, as eſpecially the Water and Syrup of red Poppies are not only allow'd, but accounted Specificks in this Diſeaſe, and in the Pleuriſy: Moreover we may ſometimes uſe Diacodiats ſo the ſtrength holds, and the Pulſe be ſtrong, and in a good temper: For the pain of the Breſt, if at any time it proves troubleſome, its proper to uſe ſometimes Oyntments, Fomentations, and Cataplaſms.

The Secondary Therapeutick Indication, whereof the Intentions are to Concoct, and to diſcharge by Spittle, the matter ſticking in the Lungs, (ſince it cannot be diſcuſt, or drank up again) requires Medicines commonly call'd Maturatives and Expectoratives; but they muſt both be temperate, to wit, ſuch as rather appeaſe than exaſperate the Thirſt and Feaveriſh heat. We have given you before in the Chapter of the Cough, the kinds of theſe Medicines, which are properly call'd Pectorals. We ſhall now ſet down the choiceſt Preſcripts, and moſt proper for this affect.

Preſcripts of Medicines.

1. 2. Medicines Conducing to the Firſt and Second Intention, are preſcrib'd according to the Forms following.

TAke Water of Ladies Thiſtle ten Ounces, of red Poppies three Ounces, Syrup of the ſame an Ounce, Pearl prepar'd a Dram: Make a Julape, the Doſe is ſix ſpoonfuls every fourth hour.

Take the Waters of Black-Cherries, Carduus Benedictus, and Baum, of each four Ounces, Powder of a Boars Tusk a Dram, Syrup of Violets ten Drams: Make a Julape, and take it after the same manner.

Take Grass Roots three Ounces, shavings of Ivory and Hartshorn, of each three Drams, Raisins ston'd an Ounce and a half, Licorice two Drams; boil them in three pounds of fountain water to two pounds, to the straining add Syrup of Violets an Ounce, Sal Prunella a Dram: Make an Apozeme, take to three or four Ounces thrice a day.

For the same Intention, *viz.* that the emptied Vessels may withdraw the matter maintaining the Disease, or may drink up again the Morbifick matter it self, a Purge also is prescrib'd by some: In the Practise of the Ancients, it was a thing in constant use after bleeding, to Order Preparatives and Purgers against this Disease, as well as against most others: And Chymists of late with a greater confidence give Vomits, and cry them up before all other Remedies in a Peripneumonia. Nay further, neglecting bleeding, or forbidding it, they lay the chief stress of their Cure in Antimonial Emeticks, though I know not whether any thing can be imagin'd more pernicious than that their rash proceeding. In rustick and robust Bodies sometimes this Medicine is given without harm, but in tender Constitutions it may be reckon'd little Inferiour to poyson: And as to purging, though it be not proper in the very beginning, but in a manner always does harm, yet the Morbifick matter ceasing to flow to the part, and the effervescence of the Blood being appeas'd, you may empty the Body gently with a Purging Medicine.

Take Gereons Decoction of Sena four Ounces, Syrup of Roses Solutive an Ounce: Mix them, make a Potion.

Take the best Sena three Drams, whole Cassia, Tamarinds, of each half an Ounce, Coriander-seeds two Drams: Boil them in a sufficient quantity of fountain water, to six Ounces; to the straining add Syrup of Violets an Ounce, Clarifie it with the White of an Egg, and give it.

Let not Purges be given always, nor ever in this Disease without consideration, but Glysters must be given frequently, nay for the most part every day; but let them be only Lenitive and Emollient, so that they gently loosen the Belly without much stirring the Blood and Humours: For this end Milk, or Whey with brown Sugar, or Syrup of Violets often do well. Or,

Take the Leaves of both Mallows, Melilot, and Mercury, of each a handful, Linseed, and sweet Fennel-seeds, of each half an Ounce, sweet Prunes, in number six: Boil them in a sufficient quantity of fountain water to a pound, to which add Syrup of Violets an Ounce, Sugar ten Drams, Sal Prunella a Dram: Make a Glyster.

3. Medi-

3. Medicines for the Third Intention, *viz.* For diſſolving the clamminess of the Blood, are uſually given in the Form of a Powder, Spirit, Draught, or Bolus according to the Forms following.

1. *Powders.*

TAke Crabs Eyes powdred two Drams, Sal Prunella a Dram and a half, Sugar of Pearl a Dram: Make a Powder, divide it into ſix parts, take one every ſixth hour, with ſome proper Julape or Apozeme.

Take Powder of a Boars Tusk (or of the Jaw-bone of a Pike) Crabs Eyes, of each a Dram and a half, Flowers of Sal Armoniack, Powder of red Poppy Flowers, of each half a Dram: Mix them for four Doſes.

2. *Chymical Spirits and Liquors.*

TAke Spirit of Sal Armoniack diſtill'd with Olibanum three Drams: The Doſe is from twelve to fifteen, or twenty Drops thrice a Day.

Take Spirit of Urine, or of Soot three Drams, give it after the ſame manner.

Take Spirit of ſweet Nitre, viz. *often Cohobated with Spirit of Wine three Drams: The Doſe is from ſix drops to ten, after the ſame manner.*

Take Spirit of Tartar half an Ounce: The Doſe is from fifteen drops to twenty, or twenty five, with a fit Vehicle.

Take of the ſimple Mixture an Ounce: The Doſe is from a Scruple to half a Dram after the ſame manner.

3. *Draughts.*

TAke Carduus water a pound, freſh Horſe-dung three Ounces, diſſolve it warm, and filter it: The Doſe is three or four Ounces twice or thrice a day, adding Syrup of Violets, or of red Poppies half an Ounce.

Take

Take Leaves of Dandelion two handfuls, being bruis'd, pour to them Water of Ladies Thiſtle half a pound, Treacle water half an Ounce: Wring it forth hard, to which add Powder of Crabs Eyes a Dram, take four or ſix ſpoonfuls thrice a day.

The Fourth Intention of Curing, having regard to the moſt urgent Symptoms, ſuggeſts to us various preparations of Medicines. 1. In reſpect of the Feaver, the Julapes and Apozems before ſet down are proper. Moreover you muſt frequently uſe Sal Prunella. 2. For the Cough and difficulty of Breathing, Linctus's, Lohochs, and Decoctions, or Pectoral Julapes are given with ſucceſs.

Take Syrup of Jujubes, of Maiden-hair, of each an Ounce and a half, Syrup of Violets an Ounce, Flowers of Nitre a Scruple: Make a Linctus to be taken now and then with a ſtick of Licorice.

Take Syrup of Dialthea an Ounce, Diacodium, Syrup of red Poppies, of each half an Ounce, Crabs Eyes finely powdred two Scruples: Make a Linctus to be taken as the other.

Take Syrup of Hyſſop, of Licorice, of each an Ounce and a half, Powder of red Poppy Flowers a Scruple, Crabs Eyes a Dram, Lohoch de Pino ſix Drams: Mix them, make a Lohoch, of which take the quantity of a Nutmeg four times, or oftner in a day.

Take Roots of Graſs, Chervil, Marſh-mallows, of each an Ounce, Figgs in number four, Jujubes, Sebeſtens, of each in number ſix, Raiſins of the Sun an Ounce, Licorice three Drams, Barley half an Ounce, boil them in three pounds of fountain water to two pounds: Strain it, the Doſe is three or four Ounces.

Take Raiſins ſton'd an Ounce and a half, Filberts ſlic'd in number four, Licorice ſlic'd three Drams, Hyſſop-water a pound and a half: Make a cloſe and warm Infuſion according to art for ſix hours, to the ſtraining add Syrup of Althea an Ounce and a half: Make a Julape, the Doſe is three or four ſpoonfuls often in a day, ſwallowing it down by little and little.

3. Againſt want of Sleep. *Take of red Poppy water three Ounces, Syrup of the ſame ſix Drams, Plague water two Drams: Make a draught to be taken going to Bed.*

If the Pulſe be ſtrong, and the ſtrength holds, *Take Cowſlip water three Ounces, Syrup of Meconium half an Ounce: Mix it, and drink it going to Bed.*

4. If the pain be preſſing about the part affected, *Take of the Ointment of Marſh-mallows two Ounces, Oyl of ſweet Almonds an Ounce and a half: Mix them for a Liniment to be apply'd with thin Lawn Paper.*

Take

Take Oyntment of Marſh-mallows, and the Pectoral Oyntment, of each an Ounce and a half, Oyl of Linſeed freſh drawn a Dram, to which add of the Emplaiſter of Mucilages what ſuffices: Make a Plaiſter for the Region of the Breſt, to be apply'd on the part affected.

Fifthly, For the laſt Intention of Curing, which anſwering the Secondary Indication preſcribes ripening and expectorating Medicines, the Forms following are proper.

Take Linſeed Oyl freſh drawn three Ounces, Syrup of Violets two Ounces, Hyſſop water half a pound: Mix them in a Glaſs, take two or three Ounces thrice a day, ſhaking the Glaſs firſt.

Take Olibanum powdred a Dram, put it in an Apple made hollow, and let it Roaſt in hot Embers: Let it be eaten going to Bed, and let the perſon do this three or four times.

Take Oyl of ſweet Almonds freſh drawn, Syrup of Maiden-hair, of each an Ounce and a half, Sugar Candy two Drams: Bruiſe them in a Glaſs Mortar, till they are throughly mixt: Make a Linctus, and take of it often with a ſtick of Licorice. Take alſo a ſpoonful of it thrice a day, in a draught of Poſſet-drink.

As to the reſt, the Remedies preſcrib'd in a beginning Phthiſick are good alſo here.

I ſhall now give you an example or two of Perſons affected with a Peripneumonia: Whilſt I was writing theſe things, I was call'd to one very ill of a Peripneumonia: This Perſon being about Fifty Years of Age, of a lean Body, and a Bilious temperament; upon taking Cold fell into a Feaver with a Cough, a pain in his Breſt, and a difficulty of Breathing: Having ſo lain ill four days without any Remedy or Phyſical Adminiſtration; I found him in a high Feaver with a Thirſt, and mighty Inflammation of his Præcordia, and fetching Breath with great Pain and difficulty, his Thorax much labouring, and being troubled with a wheezing in the Wind-pipe, ſo that he ſeem'd manifeſtly in the very Agony of Death: His Pulſe, though quick and troubled, yet being ſtrong enough, I preſently ordered eight or ten Ounces of Blood to be taken from him: By which finding ſome eaſe, after three hours intermiſſion, a Glyſter being firſt Adminiſtred, I ordered him to Bleed again to twelve Ounces. Moreover, I directed him to *take twelve drops of Spirit of Hartſhorn* every ſixth Hour with a proper Julape, and betwixt whiles, a Doſe of the following Powder.

Take Powder of Crabs Eyes, and Sal Prunella, of each a Dram and a half, Pearl a Dram, Sugar Candy two Scruples: Make a Powder, divide it into eight parts.

He took alſo a Draught of a Pectoral Apozeme often at pleaſure; by the uſe of theſe things, all the Symptoms began to abate within three days, and the night following he ſweated and

ſlept

ſlept a little: The Day after he was Blooded again, and afterwards the ſame Medicines being continued, he perfectly recovered within four or five days: The Blood taken from him was always in its ſurface viſcous and ill coloured.

A Gentleman of a Sanguine Complexion, and a ſtrong habit of Body after immoderate drinking of Wine, fell into a Feaver with a dangerous Peripneumonia; ſo that thirſt and heat very much preſſing him, and ſitting upright always in his Bed, or in his Chair, and almoſt continually panting, he had very much ado to draw in Air enough to ſupport Life: He being not able to loſe much Blood at a time, I drew Blood twice or thrice from him one day after another, frequent Glyſters were Adminiſtred. Moreover Apozemes, Julapes, alſo Spirit of Sal Armoniack, and Powders of Shells were given him by turns: Within four or five days the Feaver abated ſomewhat, and he began to breath better, and to take now and then ſhort ſleeps, though he complain'd ſtill of a mighty heavineſs upon his Breaſt, and an intolerable oppreſſion of his Lungs. Wherefore bleeding being no longer ſafe, I apply'd large Veſicatories to his Arms and Legs: The Bliſters in his Arms dry'd up in a ſhort time; but thoſe on his Legs did not only continue open, but ran mightily after five or ſix days, and ſo for near a Month daily diſcharg'd a vaſt quantity of a moſt ſharp humour: In the mean time his Lungs grew better by little and little, and at length were wholly freed of their incumberance. Laſtly, The Bliſters rais'd by the Veſicatories, could very hardly be throughly Cur'd, and not without frequent Purging.

CHAP.

CHAP. IV.

Inſtructions and Preſcripts for the Cure of the Pleuriſie.

THe Pleuriſie is an Inflammation of the *Pleura* caus'd by a boiling Blood flowing into it through the Vertebral Arteries, and there growing clammy, with a continual and acute Feaver, a pricking pain of the ſide, a Cough, and a difficulty of breathing.

When a Pleuriſie commencing paſſes into a Peripneumonia, or an Empyema, or inclines to a Phthiſick, there is a proper method of Cure particularly ſet down in each of thoſe Diſeaſes for it: But as to what concerns our preſent purpoſe, Three Indications preſent themſelves for a primary and ſimple Pleuriſie, *viz.* a Curatory, Preſervatory and Vital one.

The Firſt Indication takes care that the Inflammation or Obſtruction of the Blood in the Lungs be remov'd by all poſſible means as ſoon as may be: Wherefore in a Pleuriſie let a Vein be open'd, and ſo the ſtrength holds, and the Pulſe be ſtrong, let the Perſon bleed freely; and truly it is much better to take a large quantity of Blood at firſt, and every time after (as often as there is need to repeat it) than to Bleed often, and to draw a a little at a time; becauſe a great many portions of the Blood grown clammy and degenerated into a viſcous nature, are gathered together about the part affected; which unleſs withdrawn from thence, upon a great emptying of the Veſſels by a large emiſſion of Blood, ſo that the greateſt part of them flow forth, the bleeding will be fruſtrated of its deſired affect: Its all one in which Arm the Vein be open'd, though its now commonly done on the ſide affected.

But if by reaſon of the weakneſs of the Pulſe, and the failing of the Animal faculty, you ought neither to Bleed at Firſt, nor to repeat it though the pain be very urgent; then Cupping-Glaſſes with a Scarification being apply'd to the place griev'd, may very well ſupply its place. Moreover to take away the Inflammation of the *Pleura*, beſides an Evacuation of Blood by breathing a Vein freely, or by Scarification, its Serous and other Excrementitious humours muſt alſo be ſet upon, and be gently purg'd forth of its Maſs, and from the Bowels by Siege, Urine, and Sweat. Strong Purges are juſtly forbidden, becauſe they

trouble the Blood, and force it farther into the Places affected; and Antimonial Vomits (though approved by ſome) are neither ſafe, nor grounded upon reaſon. Let Glyſters be frequently, or rather daily Adminiſtred; nay and ſometimes gentle Purges may be allow'd ſo the Feaver be not very great, qualifying Julapes and Decoctions, and things gently moving Sweat or Urine, ſuch as before preſcrib'd for the Peripneumonia, are alſo proper here. Let all hot things of a ſharp or ſmart nature, whether they are Spices, or things containing a Vinous Spirit, be carefully avoided.

The Second Indication being for preſervation, and directed againſt the clammineſs and effervеſcency of the Blood, preſcribes thoſe Medicines, which conſiſting of a Volatile, or Alkaliſate Salt, deſtroy the Combinations entred into by the Acid, fixt, and otherwiſe Morbifick Salts, with other more groſs Particles: In which reſpect the Eyes and Claws of Crabs, the Tuſk of a Boar, the Stone of Carps, the Jaw-bone of a Pike, the Bone in the Heart of a Stag, the Piſſe of a Deer, Sal Prunella, Salt of Coral, the Volatile Salt of Urine, or of Hartſhorn, Powder of Goats Blood, Infuſion of Horſedung, Spirit of Hartſhorn, of Sal Armoniack, Spirit of Tartar, Mixtura Simplex, Bezoartick Mineral, Antimony Diaphoretick, Flowers of Sal Armoniack, are very famous Remedies in the Pleuriſie.

The Third and Vital Indication, which takes care that the ſtrength and Vital heat be preſerv'd in their due Tone and State, during the Courſe of the Diſeaſe, preſcribes principally a fit Diet, and likewiſe Cordial Remedies and Anodines, and things which ſeaſonably afford Relief to other Symptoms, if haply they preſent: Firſt, in a true Pleuriſie you muſt order a moſt thin Diet, *viz.* conſiſting of meer Oat, and Barley-meats, and for ordinary drink, Ptiſan or Poſſet-drink is more proper than Beer alone, though in a mighty thirſt, this alſo may be allow'd in a moderate quantity. Moreover to quench thirſt, Julapes, Apozemes and Emulſions may be taken at ſet times, to all which let Sal Prunella be added. Secondly, let only temperate Cordials be given, which may gently refreſh the Animal Spirits, and not add to the Accenſion of the Blood which burns before too fiercely: For theſe intents the *Waters of Ladies Thiſtle, Carduus Benedictus, Bawm, Borage, Cowſlips, and Black-Cherries,* are uſually given with good ſucceſs, to which the Powders of Pearl and Coral may be added. Thirdly, Anodines muſt be uſed both inwardly to procure ſleep, if at any time it be very much wanted; as alſo outwardly to eaſe the pain of the ſide: The moſt uſual things of the former kind are the diſtill'd water, Syrup, and Powder of the red Poppy, which are accounted Specificks in the Pleuriſie, as well as in the Peripneumonia.

nia. Moreover, when a very acute pain and watchings preſs very much, we may give alſo Diacodiats: Againſt Pains, Oyntments, Fomentations, Cataplaſms, and ſometimes the warm Inwards of Animals newly kill'd, are proper to be applyed.

I ſhall now give you Select Forms of Medicines adapted to each of theſe Indications.

●

Firſt, Therefore about the beginning of the Diſeaſe, to take away the Inflammation, Julapes, Apozemes, Powders, Glyſters, and gentle Purges are wont to be preſcrib'd.

Take Water of Ladies Thiſtle eight Ounces, Water of red Poppies four Ounces, Syrup of the ſame an Ounce, Sal Prunella a Dram: Make a Julape, the Doſe is two or three Ounces every third hour.

Take Graſs Roots four Ounces, Barley half an Ounce, parings of Apples a handful, Raiſins of the Sun an Ounce, Licorice two Ounces; boil them in three pounds of fountain water to two pounds: To the cleer ſtraining add Syrup of Violets an Ounce and a half, Sal Prunella a Dram and a half: Make an Apozeme, the Doſe is two or three Ounces often in a day.

Take Sal Prunella two Drams, Flowers of Nitre a Dram, Powder of the Flowers of red Poppies two Scruples, Sugar Candy four Scruples: Make a Powder, the Doſe is half a Dram, three or four times a day.

Take of the Decoction of Mallows Roots and all, together with ſweet Prunes a pound, Syrup of Violets three Ounces, Sal Prunella a Dram: Make a Glyſter.

Take of whole Caſſia bruis'd two Ounces, Tamarinds an Ounce, white Roſe Flowers a handful, Coriander-ſeeds two Drams; boil them in a ſufficient quantity of fountain water to a pound: To the ſtraining add Syrup of Cichory with Rhubarb two Drams: Clarify it with the White of an Egg, the Doſe is five or ſix Ounces in the Morning, for two or three days one after the other.

Secondly, To diſſolve the clammineſs or coagulating Viſcouſneſs of the Blood, the following things are of uſe, *viz.* in the Form of a Drink, Powder, and Spirit.

Take freſh Horſedung four Ounces, Carduus water a pound and a half; make a cloſe and warm Infuſion for two hours, then filter the Liquor, to which add Syrup of the Juice of Dandelion, or of Cichory two Ounces, Spirit of Sal Armoniack a Dram, give five or ſix ſpoonfuls three or four times a day

For this end Water of Horſedung does admirably well.

Take Horſedung four pounds, Leaves of Carduus Benedictus, Ladies Thiſtle, Scabious, Pimpernel, of each three handfuls; being ſlic'd and mixt together, pour to them of freſh Milk ſix pounds, diſtil them

with common Organs: The Doſe is two or three Ounces, either alone, or with other diſtill'd Waters in the Form of a Julape.

For the ſame uſe the Tinctures or Solutions of other Dungs are given by ſome Phyſicians, and are highly magnifyed by them. *Helmont* deſervedly commends in the Pleuriſie the *Dung of an Ox*, *Panarolus Pidgeons Dung*, others the *White of Hens Dung*: *Epiphanius Ferdinandus* uſually gave with good ſucceſs in the Pleuriſy, the *Decoction of Tobacco macerated in new Wine*. *Valeriola* uſed the *Decoction of the Flowers of red Poppies*, as a try'd and familiar Remedy. *Sylvius* preſcribes the following mixture to be taken one ſpoonful after another, by little Intervals of time.

Take the waters of Stone-Parſly and Hyſſop, of each two Ounces, Fennel-water an Ounce, ſimple Treacle water half an Ounce, Laudanum Opiatum four Grains, Sal Armoniack half a Dram Syrup of red Poppies an Ounce: Mix them.

To this compoſition, *Frederick Deckers* adds *Powder of Crabs Eyes, and Bezoartick Mineral of each a Scruple.*

Medicines very efficacious for this uſe, are wont to be given in the Form of a Powder; for Example,

Take Powder of Crabs Eyes two Drams, Sal Prunella a Dram and a half, red Poppy Flowers half a Dram: Mix them, make a Powder, the Doſe is half a Dram, three or four times in a day, with a fit Vehicle.

Inſtead of Crabs Eyes, you may uſe the *Powder of the Jaw-bone of a Pike, or of a Boars Tusk, or of a Stags or Bulls Piſle*, and if theſe do not ſucceed, you may try what follows.

Take Antimony Diaphoretick, or its Ceruſe, or Bezoartick Mineral two Drams, Volatile Salt of Hartſhorn half a Dram, Powder of red Poppy Flowers two Scruples: Make a Powder, the Doſe is a Scruple or half a Dram, thrice or oftner in a day.

It is for the ſame Intention of Curing, that *Riverius* gives *Powder of Chimney Soot, from half a Dram to a Dram*, and that others give the *Powder of Pigeons or Hens Dung*. Nay farther, according to this Analogy by which the Dungs of Animals ſtor'd with a Volatile Salt give relief in this Diſeaſe; its probable that the *Dung of a Dog* may prove no leſs ſucceſsful in Curing the Pleuriſie than in the Squinancy; and ſo much the more likely, becauſe theſe Diſeaſes often interchange their Types, and the one aſſumes the likeneſs of the other: Chymical Liquors endow'd with a Volatile Salt, ſometimes alſo work great effects in the Pleuriſie.

Take Spirit of Blood two Drams, Red Poppy water three Ounces, Syrup of the ſame an Ounce: Mix them, give a ſpoonful of it every other while.

Take Spirit of Sal Armoniack diſtill'd with Olibanum three Drams, the Doſe is from twelve drops to fifteen or twenty, three or four times

a day in a fit Vehicle. After the ſame manner you may give Spirit of Urine, of Soot, or of Hartſhorn.

Take Spirit of Tartar three Drams: The Doſe is a Scruple in a fit Vehicle.

Take Mixtura Simplex three Drams: The Doſe is from a Scruple to half a Dram.

3. As to the Third Indication, beſides a thin Diet, Cordial Remedies, and Anodines are preſcrib'd: Forms of the former kind may be ſupply'd by the Julapes and Apozemes preſcrib'd for the firſt Indication, and by the Spirits and Powders for the Second: Inward Anodines to be given in Watchings, and in a very Intenſe pain are preſcrib'd according to the Forms following.

Take red Poppy water two Ounces, Syrup of the ſame ſix Drams, Spirit of Hartſhorn twelve drops: Make a draught to be taken going to Bed.

If we muſt go higher, *Take Carduus water two Ounces, Diacodium from three Drams to half an Ounce, or ſix Drams, Spirit of Sal Armoniack with Frankincenſe half a Scruple: Make a draught. Sometimes, though rarely, its neceſſary to riſe to Laudanum's, which being ſeaſonably given, have a mighty good effect, inaſmuch as they procure Sleep, and move Sweat and Urine.*

Take water of Cowſlip Flowers two Ounces, Laudanum Tartariz'd, from ſixteen drops to twenty, Spirit of Blood half a Scruple, Syrup of Violets two Drams: Mingle them, make a draught.

Outward Anodines are uſually preſcrib'd in the Form of an Oyntment, Fomentation, and Cataplaſm.

Take Oyntment of Marſh-Mallows two Ounces, Oyl of ſweet Almonds an Ounce, Album Græcum two Drams: Mix them by braying them together.

Take of the Emplaiſter of Mucilages two Ounces and a half; Malax it with Oyl of Linſeed, and let it be apply'd upon Lawn Paper.

Take the tops of Both Mallows, Leaves of Mercury and Beets, of each three handfuls: Boil them in a ſufficient quantity of fountain water; let the ſtraining be us'd for a Fomentation.

Take the remaining fæces of the Herbs, after the Liquor is wrung forth, and being bruis'd, add to it of Oat-meal ſix Drams, Linſeed, Fenugreek-ſeeds, of each two Ounces, Oyntment of Marſh-Mallows two Ounces: Make a Cataplaſm.

I need not go far for Stories and Inſtances of perſons troubled with the Pleuriſie; for I have a notable Example of this Diſeaſe now under Cure, *viz.* a very fine young Woman, ſubject moſt frequently, and as it were habitually to that affect, is committed to our care. This Virgin, who is very fair, of a Sanguine Complexion,

plexion, but of a weakly Conſtitution, has been wont for many years paſt upon every ſlight occaſion, *viz.* upon taking Cold, or by errours in any of the ſix *nonnatural things*, nay ſometimes upon the meer change of the Seaſon, or of the Air, to fall into a Feaver, preſently accompanied with pains of the *Pleura*, a Cough, and a difficulty of Breathing, and for the moſt part horrible Convulſions following them. She has been taken ſo very ill formerly of this Diſtemper, that ſhe has been often forc'd to keep her Chamber ſix Months or more every year; but of late, though ſhe be not freed from this affliction, yet ſhe is ſeldomer tormented with it: The laſt year ſhe was pretty well all the Summer, and well near all the Autumn; about the beginning of Winter ſhe fell ſick of that Diſeaſe, and now towards the end of it, is fallen ill again. The Pleuritick pain conſtantly poſſeſſes the right ſide, where the Blood ſticking, and being extravaſated in its paſſage about the Intercoſtal Muſcles, the Irritated Fibres commence a moſt tormenting pain, together with a Convulſive motion of Coughing which they reiterate almoſt perpetually: In the mean time the Lungs being ſound enough, and open in their paſſages, readily convey the Blood, as clammy as it is, without any lett or ſtay, which often is the cauſe of a Peripneumonia. No Remedies are wont to do good to this perſon without Bleeding, which is always ſo particularly neceſſary, that every time ſhe is ill, we are forc'd even whether we will or no, to repeat it two or three times, nay ſometimes oftner: The Blood emitted has conſtantly a Viſcous and whitiſh Film on its ſurface. This Diſeaſe was always a ſimple Pleuriſie without any Peripneumonia, and for its Cure ſhe conſtantly us'd the following method with ſucceſs.

Take Spirit of Sal Armoniack with Gum Ammoniacum three Drams, give from fifteen drops to twenty thrice a day, with the following Julape.

Take Carduus water, Black-Cherry water, of each ſix Ounces, Hyſterick water a Dram, Sugar ſix Drams: Betwixt whiles ſhe took a Doſe of Powder with three Ounces of an Apozeme.

Take the Powders of Crabs Eyes, of a Bores Tuſk, of Sal Prunella, of each a Dram: Make a Powder, divide it into ſix parts.

Take Graſs Roots three Ounces, Candied Eringo's an Ounce, Shavings of Ivory and Hartſhorn, of each two Drams, parings of Apples a handful, Raiſins of the Sun an Ounce: Boil them in three pounds of fountain water to two pounds; add to the ſtraining, Syrup of Violets an Ounce, Sal Prunella a Dram: Mix them, make an Apozeme.

Gliſters

Gliſters of Milk with Syrup of Violets were adminiſtred ſometimes every day, and ſometimes every other day; if at any time Opiats, though never ſo gentle, were given her to allay pain, commonly afterwards an aking and heavineſs of the Head, and Convulſive Affects moſt ſorely tormented her.

CHAP. V.

Inſtructions and Preſcripts for the Cure of an Empyema.

BY the word *Empyema*, according to its uſual acceptation, is denoted a Collection of *Pus*, or corrupted matter within the Cavity of the *Thorax*, by which the Organs of Reſpiration are oppreſt: That *Pus* commonly flowing thither, either from a *Pleuriſie*, or a *Peripneumonia* (and ſometimes haply from a *Squinancy*) ſuppurated and broken.

As to the Cure of an *Empyema*, we muſt in the Firſt place conſider whether the ſigns of this Diſeaſe, as to the reality of its preſent Being, be certain or doubtful; if certain, there will not be much need of Phyſick, but only the Body being prepar'd, you may preſently proceed to open the ſide. Therefore if after a *Pleuriſie* or *Peripneumonia* not rightly Cur'd, or after an inward effuſion of Blood occaſion'd by a ſtroak, fall, or wound, there be perceiv'd a floating of *Pus*, or of corrupted or bloody matter within the Cavity of the *Thorax*, and this with little or no Spitting, we need no longer think of Maturating or Expectorating Medicines; but the Belly being looſen'd, and the Blood and humours duly qualified by Julapes, Apozemes, and Anodines, either order a bare Inciſion; or in tender and timorous perſons, Firſt, let a Cautery be apply'd betwixt the ſixth and ſeventh *Vertebræ*, and after the Eſchar being rais'd, let the Inciſion Knife be entred obliquely towards the hinder and upper parts, and that leiſurely, and by little and little, till it penetrate into the Cavity of the *Thorax*, and then a little ſilver Pipe being put in, let the matter within contain'd, be let forth ſome at one time, and ſome at another, but ſo that as far as the ſtrength will bear, the evacuation of the whole humour be as quick as may be; for a portion of it being left within, upon frequent admiſſion of air to it, will ſtinch moſt horridly within a few days; to prevent which evil, or ſuddenly

ly to remove it, let a vulnerary and abſterſive Liquor be injected with a Syringe twice or thrice a day. After the Inciſion is duly perform'd with what elſe belongs to it, well known to skilful Chirurgions, there will not be much more left for a Phyſician to do: He muſt preſcribe a proper Diet, frequent Gliſters to looſen the Belly (as often as occaſion requires) and likewiſe vulnerary Medicines commonly ſo call'd, which hinder the diſſolution of the Blood, and its running into Seroſities prejudicial to the Breſt.

But if the Signs of this Diſeaſe are not certain, and (as it uſually happens when a Peripneumonia, or an Impoſtume of the Lungs precede it) are wholly doubtful, you muſt not proceed to an Inciſion too haſtily or inconſiderately: For I have known ſome Spitting forth a purulent matter, nay a fætid *Pus*, to whom an Inciſion of the *Thorax* has prov'd of no good effect, and not without ſome prejudice. Therefore till it ſhall appear by infallible Signs that it is an abſolute *Empyema* you may uſe for a while expectorating Medicines (ſuch as before preſcrib'd for Curing a Peripneumonia) and alſo things gently moving an Evacuation by Urine and Sweat: But theſe at length availing nothing and the *Empyema* ſtill continuing or encreas'd (ſince it is better, ſo there be ſtrength, to try a doubtful Remedy than none) you may proceed to the Inciſion.

As to Forms of Medicines requiſite for Curing an *Empyema*; before the Inciſion the ſame Remedies are proper, which are preſcrib'd for a Peripneumonia, but the inciſion being over, the following will be of particular uſe.

Againſt Faintings and Swoonings, which happen during that Operation, or after it: Let the following Julape be always in a readineſs to be taken now and then to four or five ſpoonfuls.

Take the Waters of Bawm, and of Black Cherries, of each ſix Ounces, Aqua Mirabilis an Ounce, Pearl powdred a Dram, Syrup of Clove Gilly-flowers an Ounce: Mingle them, make a Julape.

Let

Let the following Decoction be taken three or four times a day.

TAke Leaves of Harts Tongue, Speedwel, Agrimony, Colts-foot, Mous-ear, Sanicle, of each a handful, Roots of Madder and Chervil, of each an Ounce, Barley half an Ounce, red Ciches half an Ounce, Raiſins of the Sun an Ounce and a half: Boil them in four pounds of fountain water till half be conſum'd; when it is taken, let it be ſweeten'd at pleaſure with Clarified Honey, or with Syrup of Mous-ear. If there be no Feaver, let the following Pills be taken at Night, and early in the Morning, to a Scruple or half a Dram.

Take Powder of Crabs Eyes two Drams, Flowers of Sulphur a Dram, Sal Prunella half a Dram, Species of Diarrhodon Abbatis a Scruple, Venice Turpentine waſh'd, what ſuffices: Make a Maſs, and form it into Pills: or the Turpentine being omitted let the ſame Medicine be taken in the Form of a Powder, from half a Dram to two Scruples twice a day.

CHAP. VI.

Inſtructions and Preſcripts for Curing the Impoſtume of the Lungs.

THe Morbifick matter of this *Vomica*, or Impoſtume of the Lungs is always a meer *Pus*, which nevertheleſs is there engendred tacitely, and as it were unawares, without a Feaver or Inflammation, and lyes ſo private, that it ſcarce preſents any ſigns of it ſelf, but a little Cough, which at firſt is dry, then turns moiſt, which continuing ſome time, the Breath is drawn with ſome difficulty, the Spirits faint, and the Body wears away by little and little, though in the mean time the Spittle has no *Pus* or Blood mixt with it: But if the Impoſtume unexpectedly breaks, it commonly kills the Patient.

If after the Impoſtume is broken, and the Purulent Spittle beginning to come away with eaſe, and the ſtrength holding firm,

there be room for any method of Cure: The Primary Indications according to the common cuſtom in moſt Diſeaſes muſt be theſe three, *viz.* Curatory, Preſervatory, and Vital. The Firſt, directs that the matter of the Impoſtume be with ſpeed evacuated by Spitting, and that the ſides of it be cleans'd and made ſound again as much as poſſible. The Second provides againſt a confluence of new matter to that Receptacle, and other neighbouring parts of the Lungs, whence a Conſumption would be engendred. The Third relieves the faintings of the Spirits, and reſtores loſt ſtrength, and the Nutrition which was fruſtrated.

In reſpect of the Firſt Indication, expectorating Medicines (commonly ſo call'd) and of the hotteſt and ſmarteſt nature, which cleanſe and dry moſt, and eſpecially (ſince for the moſt part here is no Feaver) Sulphureous things are proper; which alſo are preſcrib'd according to the Forms following.

Take Tincture of Sulphur three Drams, give from ſeven drops to twenty going to Bed, and early in the Morning in a ſpoonful of Syrup of the Juice of ground Ivy: Or,

Take Syrup of our Diaſulphur ſix Ounces, give a ſpoonful at the ſame hours.

Take dry'd Leaves of ground Ivy, Germander, Maiden-hair, Colts-foot, Hyſſop, white Hore-hound, Savory, of each a handful, the Roots of Elecampane, Florentine Orris, Chervil, of each an Ounce, Anniſeeds half an Ounce: Boil them in ſix pounds of fountain water to three pounds and a half, add towards the end White-wine ſix Ounces, the beſt Clarified Honey three Ounces: Let the ſtraining be Clarified and kept for uſe: The Doſe is ſix Ounces thrice a day warm. Or,

Take Water of quick Lime ſix pounds: Put it in a large mouth'd Glaſs with the following Bag.

Take dry'd Leaves of Germander, ground Ivy, white Hore-hound, of each a handful, Roots of Elecampane and Florentine Orris ſlic'd, of each an Ounce and a half, Anniſeeds bruis'd two Ounces, Licorice an Ounce and a half, Raiſins ſton'd three Ounces: Let them ſtand cold and cloſe cover'd, pour it out as you uſe it, ſtill leaving the Bag behind.

Take Lohoch Sanum three Ounces, Species Diaireos two Drams and a half, Flowers of Sulphur a Dram and a half, Oxymel ſimple two Ounces: Make a Linctus to be taken with a ſtick of Licorice.

Take Powder of the Leaves of Hedg-muſtard, and of ground Ivy, of each half an Ounce, Flowers of Sulphur a Dram and a half, Syrup of Diaſulphur, or of the Juice of Ivy what ſuffices: Make a ſoft Lohoch.

Take

Take fine Myrrh, and white Amber, of each half an Ounce, Sulphur vivum, Auripigment, of each two Drams, ſhells of Fiſtick Nuts a Dram and a half: Make a Powder for Fumigation; let it be us'd with a Paper Funnel Morning and Evening.

The Second Indication which is for preſervation, cutting off the Morbifick matter, and providing againſt the Conſumption which is apt to enſue, undertakes the purifying of the Blood, and the ſtrengthening of the Lungs; for which ends Purges, Vulnerary Decoctions, diſtill'd Waters, and Phyſick Drinks are proper.

Take Gereon's Decoction of Sena (with Agarick a Dram and a half) three Ounces and a half, Purging Syrup of Apples an Ounce, Aqua Mirabilis two Drams: Make a Potion to be taken once a week with governance.

Let the Form of the vulnerary Decoction be the ſame, which is preſcrib'd for the Empyema after the Inciſion; or becauſe there is no Feaver, you may give that Decoction of the ſhops, to four or ſix Ounces thrice a day.

Take Fir tops ſix handfuls, freſh Leaves of ground Ivy, Hyſſop, Savory, Rocket, Hedge-muſtard, Winter Creſs, of each four handfuls, Sun-flower Seeds ſix Ounces, ſweet Fennel-ſeeds two Ounces, Roots of Elecampane, and Florentine Orris, of each three Ounces, being ſlic'd and bruis'd, pour to them of Brunſwick or Spruce Beer eight pounds, diſtil it with common Organs: Let the Liquor be all mixt, and when its us'd, let it be ſweeten'd at pleaſure with Syrup of the Juice of ground Ivy: The Doſe is three or four Ounces thrice a day.

Take Roots of Sarzaparilla ſix Ounces, China Roots two Ounces, all the Saunders, of each ſix Drams, ſhavings of Ivory and Hartſhorn, of each half an Ounce, Maſtick-wood an Ounce, being ſlic'd and bruis'd, let them Infuſe according to art, and boil in twelve pounds of fountain water, till half be conſum'd, adding of Licorice an Ounce, Raiſins of the Sun four Ounces; let the ſtraining be us'd for ordinary drink.

The Third and Vital Indication preſcribes Cordial and Anodine Remedies, and a fit Diet: The ſame Forms of Medicines in a manner that are preſcrib'd for an *Empyema* after Inciſion, are proper here. Alſo the ſame Diet which is ordered in a beginning Conſumption, and Aſſes Milk often does good in this caſe: Concerning the Cure of this Diſeaſe, I have obſerv'd that an Iſſue made in the ſide has often a very good effect.

A Gentleman of a middle Age, having been always ſtrong and healthy, found himſelf ill without any manifeſt cauſe, and in a ſhort time fell into a languiſhing condition, loſing his appetite, ſleeping with difficulty, was thirſty, and had a heat about his Præcordia: He was a long time under the hands of ſome Phyſicians for the Scurvy, and of others as Hectical, and after various methods of Cure had been try'd in vain, the Diſeaſe at length openly diſcover'd it ſelf: For whilſt one Night being more reſtleſs than uſual, he toſs'd himſelf very much in his Bed; the Impoſtume within his Lungs breaking on a ſudden, he threw up by Coughing a vaſt quantity of *Pus*, which ſtunk moſt horribly, ſo that within four or five hours he had thrown up about two pounds. Moreover the Cough continuing for above two Months afterwards, he daily voided by Spittle of that Purulent, thick, and mighty ſtinking matter, till his Fleſh being conſum'd, and his ſtrength wholly ſpent, he was decay'd, and fallen away to nothing.

After the Impoſtume was thus broken, we carefully gave him Medicines to cleanſe and heal the place where it gather'd, and to mundify the Blood and the Lungs, and free them from the imminent Conſumption. Our *Tincture and Syrup of Diaſulphur*, together with *Pectoral* and *Vulnerary Decoctions and Diſtillations*, alſo *Linctus's and Balſamick Pills* were taken day after day in a conſtant method: With theſe *Gliſters*, alſo gentle *Cathartick*s and *Diuretick*s were interchangeably given; *Vaporations* firſt, then *Suffumigations* both *Sulphureous and Arſenical* were alſo us'd Mornings and Evenings. After theſe things had been carefully followed a long time without any good; we concluded to open his *Thorax*, and were ſoon directed to a place proper for it; for on the left ſide of his *Sternum*, betwixt the fifth and ſixth *Vertebræ* a tumour appear'd: Inſtead of a *Cautery*, I apply'd thereto a Suppurating Plaiſter, and within three days the top of that Swelling became red and ſoft, out of which being open'd the next day after, firſt iſſued a thin *Ichor*, and a little after a yellow and well concocted *Pus*, and afterwards it continued daily to run in a more plentiful manner, and then the ſtinking Spittle began to abate, and within a Fortnight wholly ceas'd; the Morbifick matter finding both an eaſie and more apt paſſage through that Orifice, which at length was chang'd into an Iſſue, and a Pea, or a Pill of Wood being daily put into it, there came forth continually for a year and a half a plentiful *Ichor*, and in the mean time the Gentleman having wholly got rid of any corruption in his Breſt, and recovering his ſtrong and fleſhy habit of Body, became ſound in all reſpects. Laſtly, That *Iſſue* being remov'd

to

to the Arm, he has nothing of that Diſtemper about his Breſt, nor minds longer any fence againſt it.

Shortly after this Cure, I was call'd to a Lady of Quality, who having been troubled with a Cough, and a heat of the *Præcordia* for many years, on a certain day ſenſibly perceiv'd ſomewhat broken in her Lungs whilſt ſhe was Coughing, and preſently voided by Spittle a great quantity of meer and ſtinking *Pus*; after that that Spittle with the Cough, notwithſtanding any uſe of Remedies continuing for a Week, ſeem'd rather increas'd than diminiſh'd, I adviſed that ſhe would permit an Iſſue to be cut in her ſide near the place, whence ſhe perceiv'd the *Pus* to ariſe, which ſhe readily giving way to, within three days meer *Pus*, ſuch as ſhe Spit forth by her Cough, began to run from the open Orifice; and afterwards the Morbifick matter finding a ſufficient vent by that paſſage, both the Cough and the Spitting of *Pus* entirely ceas'd, and within ſix Weeks the Patient grew perfectly well.

After this I was call'd to a robuſt man, a great Drinker, who being alſo affected with an Impoſtume of the Lungs, did Spit forth a great quantity of mighty ſtinking *Pus*: He would not permit any Iſſue to be made in his ſide; yet being very free to take all ſorts of Medicines, he got free at length of that Diſeaſe by a long uſe of them: The Medicines which chiefly did him good were preparations of *Sulphur*; wherefore our *Syrup and Tincture* were given him often every day: To theſe we gave for Vehicles, ſometimes a *Pectoral Decoction*, ſometimes a *Pectoral Hydromel*, ſometimes *Lime water*, with the Infuſion of Pectoral and Vulnerary Ingredients. Moreover *Fumigations*, eſpecially of *Sulphureous and Arſenical* things, gave great Relief.

CHAP.

CHAP. VII.

Instructions and Prescripts for the Cure of the Asthma.

AN *Asthma* is a difficult, short, thick, and pursy Breathing, with a great Agitation of the Breast, and for the most part without a Feaver: And its either meerly *Pneumonick*, proceeding from some stoppage in the Vessels that convey the Air, or meerly Convulsive, arising from some fault in the Organs of motion, or mixt when both parts are joyntly faulty.

As to its Cure there are two Primary Indications, or rather so many distinct methods of proceeding, *viz.* the one Curatory, the other Preservatory: The First teaches what is to be done in the Fit, to free the Patient from present danger; the other what out of the Fit, to take away the Cause of the Disease.

1. In the Fit there are two chief Intentions of Curing, *viz.* First, That care being taken as well of the Air, as of the Lungs, a more free Breathing be procur'd, at least as much as may suffice to support Life: And Secondly, That the Organs of Respiration be reclaim'd and made to cease from the Convulsions they are fallen into, and which are wont to be continued with obstinacy.

As to the former, in the First place let the Patient be set in an upright Posture of Body, in a pretty open place somewhat Airy, and free from Smoak, and the Breath of By-standers; then endeavour that the Lungs being freed of all inward stuffing and oppression, as well as outward compression, may be able to draw and return the Breath deeper: For these ends, lest the weight of the inferiour *Viscera* press down, and straiten the *Præcordia*, let the Belly be loosen'd by a Glister, and let the Garments and all other things covering or binding the *Thorax* be slacken'd. Moreover since in this case the Lungs are usually oppress't, either from the Blood growing too turgid within the Pneumonick Vessels, or from the *Serum* distilling forth of the Arteries and Glands into the *Ductus's* of the *Trachea*, the Sallies and Impetuosities of both humours ought to be restrain'd and appeas'd: Hence if the strength will bear it, and the Pulse be strong enough, Bleeding is often proper. Again let those things be carefully given, which

discharge

diſcharge the *Serum*, and the ſuperfluities of the inflamed Blood by Urine and Sweat: For which end *Julapes*, *Apozems*, and *Pectorals*, commonly ſo call'd, are of excellent uſe. Moreover Powders of ſhells, preparations of *Millepedes*, *Volatile Spirits and Salts* are taken with good effect. In the mean time let there be likewiſe given things that open the *Ductus's* of the *Trachea*, and make them ſlippery, and provoke expectoration; and ſuch alſo if need be, as ſtop the Catarrh diſtilling on them; for which ends *Linctus's*, *Lohoch's*, *Pectoral Decoctions*, and *Suffumigations* are proper.

As to the other intent of Curing in Fits of the *Aſthma*, *viz.* That the Organs of Reſpiration being reclaim'd from the Convulſions they are fallen into, return calmly to their ordinary Functions (unleſs this follows of its own accord, after that the turbulent boiling of the Blood and Serum within the Lungs is appeas'd:) We muſt uſe *Anti-Convulſive and Anodine Remedies*; for Medicines wont to be given in Hyſterick paſſions, are alſo proper in a Convulſive *Aſthma*.

The *Spirit of Hartſhorn*, *of Soot*, and eſpecially *Spirit of Sal Armoniack diſtill'd with Gum Ammoniacum*; alſo the *Tincture of Gum Ammoniacum*, *of Sulphur*, *Caſtoreum*, *Aſſa-fœtida*, the *Syrup of Ammoniacum*, *of Sulphur*, *Oxymel of Squills*, and the like; which being of an ungrateful taſt or ſmell, diſſipate the Spirits as it were, and withdraw them from tumultuary Efforts, prove ſometimes of notable uſe: But if the raging Spirits cannot be appeas'd by this means, we muſt come to *Narcoticks*, that ſome of them being deſtroyed, the reſt may return into order. For *Opiats* ſometimes are mighty beneficial, unleſs a ſtopping of the Lungs, and a great oppreſſion of the *Præcordia* forbid their uſe: In horrible fits of this Diſeaſe, when other Medicines have availed nothing, I have often given *Diacodium*, nay *Laudanum Tartariz'd* with good ſucceſs: Nevertheleſs theſe may not be taken without great caution; for Reſpiration which is difficult and clogg'd before, being hindred more, and that very much by them, they often put the Patient in danger of Life. Moreover to reclaim the Pneumonick Spirits from their Convulſions; its good ſometimes to put the Spirits to torture in ſome other part, for when ſome of them are any where tormented, all the reſt for the moſt part, being in a concern at it, quit their diſorderly motions. Wherefore *Veſicatories*, *Cupping-glaſſes*, *Ligatures*, and *Painful Frictions* give relief: Nay for this reaſon *Vomits* taken in the midſt of the fit do good. I ſhall now ſet down certain Select Forms of Remedies appropriated to each of thoſe ends.

First therefore to restrain the Fluxions of the Blood and *Serum*, and to discharge their superfluities, deriv'd from the Lungs, by Sweat and Urine; let the following things be prescrib'd.

Take Leaves of ground Ivy eight Ounces, Rue, Penny-royal, and Dragons, of each two Ounces, Sal Prunella a Dram and a half, Syrupus Byzantinus, Syrup of red Poppies, of each an Ounce: Mix them, make a Julape; let three or four Ounces be taken thrice or oftner in a day.

Take Grass Roots three Ounces, Roots of Butchers-Broom two Ounces, Candied Elecampane an Ounce and a half, Barley half an Ounce, Raisins of the Sun an Ounce: Boil them in three pounds of fountain water to two pounds, to the straining add of Sal Prunella a Dram and a half, sweeten it if it be needful, with a sufficient quantity of Syrupus Byzantinus, or of Syrup of Violets.

Take Tincture of Sulphur three Drams: The Dose is from six drops to ten at Night, and early in the Morning in a spoonful of the Syrup of the Juice of Ivy, or of Violets.

Take Feculæ of Aron and Briony, of each a Dram and a half, Flowers of Sulphur a Dram, Flowers of Benzoin half a Dram, Sugar Candy half an Ounce, Licorice two Drams: Make a Powder to be taken to half a Dram, or two Scruples twice a day, with the foregoing Julape or Apozeme. Or,

Take of the foresaid Powder two Ounces, Honey or Oxymel what suffices: Make a Linctus, take at Night and early in the Morning, about half a spoonful, at other times take it with a stick of Licorice.

Take Syrup of Hore-hound, and of Garlick, of each an Ounce and a half, Tincture of Saffron, and of Castoreum, of each two Drams: Mix them, take about a small spoonful in the fits.

Take Spirit of Sal Armoniack with Gum Ammoniacum three Drams, the Waters of Snails, and of Earth-worms, of each three Ounces, Syrup of Horehound two Ounces: Mix them, take a spoonful once in four or five hours.

Take Powder of Hedg-mustard, or of ground Ivy gathered in the Summer Sun an Ounce, Oxymel simple what suffices: Make a Linctus.

So much concerning the Medicines and method requisite in a fit of the *Asthma*. The other Indication which is for preservation, undertaking to remove the Morbifick cause, and the whole Morbid Root has two parts, or distinct Intents of Curing, which for the most part are both set upon together; one of these endeavours to amend the Conformation of the Lungs, if it be any way prejudiced or faulty, and the other to take away the Irregularities of the parts for motion, and of the Spirits appointed

for

for them: Both these Intents will very well be answered, if *Pectoral Remedies* commonly so call'd, are joyn'd with *Anti-Convulsives*, and are us'd interchangeably with other Medicines which have regard to the preparation of the whole Body, and to Emergent Symptoms; for which ends the following Method and Forms of Medicines may be us'd.

Take Aloe Rosata a Dram and a half, Flowers of Sulphur a Dram; Salt of Amber half a Dram, Tar what suffices: Make Pills, in number twenty four; take four in the Evening every Night, or every other, or third Night. Or,

Take Gum Ammoniacum, and Bdellium dissolv'd in Vinegar of Squills, of each half an Ounce, Flowers of Sulphur three Drams, Powder of the Leaves of Hedg-mustard, and of Savory, of each half a Dram, with a sufficient quantity of Syrup of Diasulphur, or of Oxymel of Squills: Make a Mass, form it into little Pills, and take three every Evening. Or,

Take Millepedes prepar'd two Drams, Flowers of Benzoin half a Dram, Salt of Amber two Scruples, Extract of Elecampane half a Dram, Castoreum half a Dram, Saffron a Scruple, Venice Turpentine what suffices: Make a Mass, and form it into small Pills; take four every Evening and Morning, unless when you Purge.

If Pills are not grateful, or the foresaid Medicines will not do; then let the following be try'd to free the Lungs from obstruction.

Take Spirit of Gum Ammoniacum, distill'd with Sal Armoniack three Drams, Syrup of the Juice of Ivy three Ounces, Magisterial water of Snails, and of Earth-worms, of each an Ounce, Tincture of Saffron two Drams: Mix them, take a spoonful going to Bed, and early in the Morning. Or,

Take Tincture of Gum Ammoniacum three Drams: The Dose is from fifteen Drops to twenty in a spoonful of Oxymel, or Syrup of ground Ivy. Or,

Take Tincture of Sulphur three Drams: The Dose is from seven Drops to twelve or twenty at the same hours, with a fit Vehicle.

After the like manner also other Spirits endow'd with a Volatile Salt, and mixt with Pectoral Syrups, and Cephalick waters may be usefully prescrib'd Morning and Evening.

Instead of a Mixture or Asthmatical Julape of distill'd waters of the shops, the following Magisterial may be prepar'd to be us'd frequently, and upon several occasions.

Take Roots of Elecampane, Florentine Orris, Angelica, Masterwort, of each four Ounces, of Briony a pound, Leaves of white Horehound, Hyssop, Savory, Penny-royal, ground Ivy, of each four handfuls, fresh Juniper and Ivy Berries, of each a pound, Lawrel Berries half a

pound, Seeds of sweet Fennel, Caraway, Anniſe, Lovage, Dill, of each an Ounce, Cubebs two Ounces, long Pepper, Cloves, Mace, of each an Ounce; all of them being ſlic'd and bruis'd, pour to them of Brunſwick Beer eight pounds; diſtill them with common Organs: Let the whole Liquor be mixt, and when its uſed, let it be ſweeten'd at pleaſure with Sugar, or the Syrup of the Juice of ground Ivy, or with Oxymel.

Moreover, inſtead of Oxymel, or of any common Pectoral Syrup, let the following Forms of Medicines be preſcrib'd, which are more appropriated to an *Aſthma*: And in the Firſt place the *Syrup of Elecampane*, invented by *Horatius Augenius*, and afterwards recommended by *Platerus*, *Sennertus*, *Riverius*, and other famous Practitioners ſhall be ſet down here, and ought to be frequently made uſe of.

Take Roots of Elecampane, and of Polypody of the Oak prepar'd, of each two Ounces, Currans two Ounces, Sebeſtens in number fifteen, Coltsfoot, Lungwort, Calaminth, Savory, of each a handful, one large Tobacco Leaf, Licorice two Drams, Seeds of Nettles, and of Cotton-plant, of each a Dram and a half; boil them in Wine and Honey diluted, to a pound and a half, and with the like quantity of Sugar make a Syrup: Let it be taken either by it ſelf in the Form of a Linctus, or a ſpoonful at a time Mornings and Evenings, or put a ſpoonful of it to a Doſe of the diſtill'd water or Apozeme.

Take Roots of Florentine Orris, and of Elecampane, of each half an Ounce, Garlick pill'd four Drams, Cloves two Drams, white Benzoin a Dram and a half, Saffron a Scruple, being ſlic'd and bruis'd, let them digeſt warm in a pound of rectified ſpirit of Wine for twenty eight hours: To the ſtraining add of the fineſt Sugar a pound, put it in a ſilver Baſon on hot Coles, then the liquor being fired, keep ſtirring it as long as it will burn, and then the flame going out, it will become a Syrup; let it be given after the ſame manner as the former.

Moreover, in this place we may aptly inſert the *Decoctions of an old Cock* ſo much commended by famous Phyſicians, both ancient and modern, for the Cure of the *Aſthma*. Theſe Broaths are of two kinds, *viz.* with or without Purgers, and we find various and differing ſorts of both amongſt Practical Authors, though I ſhall only give you a form or two.

Without Purgers this is a common Form:

Take Roots of Elecampane, and of Florentine Orris, of each half an Ounce, Leaves of Hyſſop, and of Horehound dry'd, of each ſix Drams, Carthamus-ſeeds an Ounce, Anniſeeds and Dillſeeds, of each two Drams, Licorice ſlic'd, and Raiſins cleans'd, of each three Drams; let them be prepar'd and ſewed up in the Belly of an old Cock, which muſt be boil'd in fifteen pounds of fountain water till the fleſh falls from the Bones, ſtrain it and let it ſettle: The Doſe of the clear Liquor is

ſix

ſix Ounces, with an Ounce of Oxymel ſimple; or if you would have it purge, in each draught diſſolve freſh Caſſia and Manna, of each half an Ounce: Let it be taken for many days together, ſometimes for a whole Month.

Riverius preſcribes a good Form of this ſort of Purging Broath.

Take Roots of Elecampane, and of Florentine Orris, of each a Dram and a half, Leaves of Hyſſop and Coltsfoot, of each a handful, Licorice ſlic'd, Raiſins clean'd, of each two Drams, Figs in number four, Senna cleans'd three Drams, Roots of Polypody of the Oak, Carthamus-ſeeds of each half an Ounce, Anniſeeds a Dram and a half: Boil them with a third or fourth part of an old Cock according to art, and make a Broath for one Doſe to be taken in a Morning; let it be continued for twelve or fifteen days.

I ſhall now give you a Relation of a Perſon, who was ſubject to fits of this Diſeaſe, which were meerly Convulſive, and of another, who was ſubject to fits of the ſame, which were partly Convulſive, and partly Pneumonick.

A Noble Man of a tall Stature, and full and ſtrong grown, having bruis'd his left Side by a fall, found himſelf injur'd upon it, and afterwards fell into an Aſthmatick Diſtemper, ſo that now and then, though at no ſet times. Firſt a pain would ſeize him about that place, and preſently after a great ſtraitneſs of Breath followed, with a vehement and long continued ſtraining of all the parts of Reſpiration, ſo that during the Fit, the Patient ſeem'd to be in the very Agony of Death: I was firſt call'd to him after he had lain ill of ſuch an Aſthmatick Fit for two days, and was look'd upon as almoſt paſt Cure. Nevertheleſs finding his Lungs to be without hurt, our Prognoſtick bid us ſtill hope well, and preſently other Phyſicians being joyn'd with me in Conſultation, it was preſcrib'd as follows.

Take Spirit of Gum Ammoniacum diſtill'd with Sal Armoniack three Drams: Let him take from fifteen drops to twenty, in a ſpoonful of the following Julape, drinking after it five ſpoonfuls; let it be repeated every ſixth hour.

Take the waters of Elder Flowers, Cammomil and Penny-royal, of each four Ounces, Snail water two Ounces, Sugar an Ounce, mix them: Between whiles he took a Doſe of the following Powder with the ſame Julape, or Pectoral Decoction.

Take Powder of Crabs Eyes two Drams, Sal Primella a Dram and a half, Salt of Amber half a Dram, mix them: Divide it into eight parts for as many Doſes.

Large *Veſicatories* were apply'd in the inſide of his Arms near his Armpits; *Gliſters* were daily adminiſtred, and frequent *Frictions*: By the uſe of theſe things he received a ſudden and unexpe-

cted ease, and within a few days got wholly free of that Fit, and afterwards as often as he perceiv'd a little touch of the said Distemper coming, he presently took a large Dose of that *Spirit*, with the same *Julape* thrice or four times a day: By which Remedy, being frequently taken sometimes for preservation, and sometimes for Cure, he has now past above two years without any great and terrible fit of his Asthma, which before was habitual, though he has now and then undergone some light touches of it, but easily blown off.

An Honourable old Gentleman (upon taking cold as 'tis judged) found himself ill; for he complain'd of a pain in the middle of his Breast by his *Sternum*, which at Night as soon as he was warm in his Bed, growing worse, disturb'd his sleep, and was very troublesome to him for the most part of the Night: Nevertheless without any straitness of Breath, or evident sign of an *Asthma*: To take away this pain he was both Purg'd and Blooded, *Pectorals* and *Antiscorbuticks* were daily given him, *Ointments* and *Fomentations* were apply'd to the place pain'd, yet without any great good or ease: For the change that happen'd after, was rather for the worse; for the pain being a little abated, he was seiz'd with a laborious and troubled Respiration, so that after his first sleep, or as he began to slumber, he was taken with a fit of the *Asthma*, and being out of Breath, and oppress't about the *Præcordia*, was forc'd to sit upright in his Bed: Moreover this painful Breathing, and Convulsive agitation of the parts for Respiration did not only return every Night, but daily grew more violent, and continued longer upon him: Insomuch that one Night awaking from his first sleep, he was seiz'd with a most violent fit of the *Asthma* which lasted for many hours, and brought him as near death as a Man might be and live. No Physician being present, a Barber then let him Blood, which gave him some relief; in the Morning upon a consultation of Physicians, he was ordered for that day a thin Diet, and a loosning *Glister*: At Night and the Morning following, he took twelve drops of *Spirit of Gum Ammoniacum distill'd with Sal Armoniack* in a Vehicle proper in that case, and continued its use afterwards for many days: *Vesicatories* were apply'd to the insides of his Arms near his Arm-pits: Moreover *Julapes* and *Pectoral Decoctions*, *Lohoch's*, *Glisters*, nay and sometimes *gentle Purges* had their turns; Bleeding also was repeated after two days. Whereas before he was wont to drink for his Mornings draught about a pint of Beer with Wormwood and Scurvygrass, Instead of this, he took about eight of the Clock, *fifteen drops of Elixir Proprietatis tartariz'd in a draught of Coffee prepar'd with a Decoction of Sage*: By these Remedies the Asthmatick Fits presently abated of their wonted fierceness; insomuch that the be-

beginning and end of every Night were quiet enough, though about the middle of it ſome uneaſineſs about the *Præcordia* kept him waking, and made him ſit upright in his Bed for an hour or two; at length growing weary of Phyſick, he took only now and then ſome of the Medicines above mentioned: But in the mean time, though his Aſthmatick Fits troubled him little or not at all by Night as before, yet by reaſon of his Lungs being very much ſtuffed, and a Serous humour falling into his Feet he could not walk faſt, or go up any ſteep Aſcent without a great difficulty of Breathing, and danger of being choak'd; and at preſent an *Aſthma* or *Phthiſick* is not ſo much fear'd as a *Dropſie*.

CHAP. VIII.

Inſtructions and Preſcripts for Curing the Dropſie of the Breaſt.

IF at any time the affect of the Dropſie or Anaſarca, being general, has taken poſſeſſion every where, or in moſt places of the Fleſh, and Cavities of the *Viſcera*: Its no wonder if that filthy Maſs of Waters gets poſſeſſion alſo of the Breaſt; but beſides this, it ſometimes happens that the Region of the *Thorax* is either originally or alone overwhelm'd with waters, the other parts in the mean time being every where ſound enough, or injur'd only Secondarily.

That Serous humour cauſing the Dropſie of the Breaſt, ariſes there either in the Form of a Vapour, which exhaling from the *Præcordia* and Sides of the *Thorax* is readily condens'd into Water, or Secondly, the *Serum* is there depos'd in its proper Form as it diſtils into that Cavity from the Mouths of the Veſſels, *viz.* of the Arteries there open'd: Or Thirdly, the Lymphæducts, or ſometimes, though rarely, the Chyle Veſſels, ſomewhere opening themſelves, or being broken may produce that affect.

A young Man of a healthy and ſtrong conſtitution, who had long us'd himſelf to violent exerciſes, both by riding and other ways, perceiv'd at length a fulneſs, or as it were a certain windy riſing in his *Thorax*, inſomuch that the left ſide of his Lungs ſeem'd to ſwell, and his Heart to be thruſt forth of its place towards the right ſide; for in that part it was perceiv'd to beat moſt: After he had continued in this condition ſome time, he perceiv'd on a certain day a Rupture as it were of ſome Veſſel within

within the Cavity of his *Thorax*, and after it for half an hours ſpace, he could not only perceive in that Region a dropping of humour as it were from the top to the bottom of his Breſt, but it could alſo be heard by the ſtanders by. Notwithſtanding this, finding himſelf otherwiſe well diſpos'd, he ſlighted Phyſick; but afterward upon motion, ſtooping, or any ſtirring of his Body, he perceiv'd in his left ſide a floating of waters inwardly gathered together: Nay, and the motion and ſound of it was moſt manifeſtly perceiv'd of others, both by handling, and by the ear: Hence as it was plain that this Perſon had a Dropſie of the Breaſt, ſo it ſeemed moſt probable that this Diſeaſe took its riſe from this, that the Lymphæducts appertaining to the left ſide of the Lungs being firſt obſtructed near their Inſertions into the *Ductus Chyliferus*, had ſwollen up to a vaſt bigneſs, and afterwards being broken, diſtill'd forth their humour into the Cavity of the *Thorax*.

This Gentleman now perceiving himſelf in danger, and having try'd ſome Medicines without any good effect, was adviſed upon a conſultation of Phyſicians, to have his Side open'd: Wherefore proviſion for the whole being made, a Chyrurgion apply'd a Cautery betwixt the ſixth and ſeventh *Vertebræ*, and the day following he put a Pipe into the Orifice, cut into the Cavity of his Breſt, upon which preſently a thick Liquor, whitiſh like Chyle, and as it were Milky iſſued forth: There were only about ſix Ounces taken from him the firſt time, and the day following as much: On the third day ſomewhat a larger quantity being let forth, he was preſently ſeiz'd with a great fainting, and afterwards being Feaveriſh, he was ill for a day or two: Wherefore till he recovered his due temper and ſtrength, it was thought fit to ſtop the egreſs of that matter, and afterwards a ſmall evacuation only of the ſame being daily made, the Cavity of his Breſt was in a manner wholly emptied, though he ſtill carries the Pipe in the Orifice with a Tap, which being drawn forth once in twenty four hours, a little gleeting of humour ſtill iſſues out: In the mean time being well diſpos'd as to his Stomack, Countenance and Strength, he Walks and Rides abroad, and performs other exerciſes which he had been formerly us'd to with vigour enough: He us'd not much Phyſick, nor did he need it: After the Inciſion we preſcrib'd him temperate Cordials, *viz.* Powder of Pearl, Julapes, and ſometimes Hypnoticks, and afterwards a vulnerary Decoction to be taken twice every day.

By this Method and Form of Medicines continued for ſome time the Perſon ſeem'd to recover his due temper, ſtrength, and habit of Body, nay and to be ſound in his Breaſt; yet he ſtill carried the Silver Pipe in the Orifice of his Side, out of which an

Ichor

Ichor continually iſſued: And when after ſome Months this being taken forth, that Iſſue was clos'd up, there was a gathering again of the ſame humour within the hollow of the Breaſt, as was perceivable by the ſound and floating of it: But afterwards as upon the return of the Diſeaſe the ſame Remedy preſented it ſelf, and conſequently the opening of the Side was ordered (Nature as it fell out performing the Office of a Chyrurgion) it happened of its own accord, and gave way for the matter which was ready to break forth; and now he is fain to keep that Orifice conſtantly open as a ſink to prevent that gathering of naſtineſs in his Breſt.

As to the Cure of the Dropſie of the Breſt, the Primary Indications, as uſually in Curing moſt other Diſeaſes, are three, *viz.* Curatory, Preſervatory, and Vital.

The Firſt endeavours that the Waters gathered in the Cavity of the Breaſt be ſome way or other evacuated. The Second prevents the gathering of new matter. The Third takes care to reſtore ſtrength, and ſpeedily to remove the Symptoms that injure it.

To ſatisfy the Firſt Indication, there are only two ways or manners of evacuation, by which that filthy Maſs of Waters may be clear'd forth, *viz.* either that the Veſſels of the Breaſt, and *Ductus's* of the humours being emptied, drink up again that *Lympha* when Rarifyed, and then convey it forth, either by the way of the Blood, or of the Breath: or Secondly that the water be all let forth in its proper Species by an Inciſion of the Side.

The former way, though ſeldom, yet ſometimes to my knowledge ſucceeds: For the Texture of the Lungs being ſpongy within, and outwardly very Porous, whilſt upon every *Diaſtole* it is dip'd in the waters lying under it, it ſometimes imbibes them being converted into vapour, and ſo either returns them to the Blood, or exhales them with the Air continually breath'd forth at the Mouth; that this effect may more readily happen for Curing this Diſeaſe, Phyſical Aids are here us'd: Therefore for that intent the paſſages of the Blood, Air, and humours, ought to be emptied as much as may be, and to be kept open and free: For this end let gentle Purges, Diureticks and Diaphoreticks be methodically given by turns, alſo Thoracical and Expectorating Remedies muſt be us'd: Let the Diet be thin and heating, and let ſuch a method be ordered in all things which may promote the exhalation of the Blood, and cauſe all the ſuperfluous humours to evaporate. I ſhall ſet down ſome Forms of Medicines proper for theſe purpoſes.

Take

Take Roots of Chervil, Butchers-broom, Polypody of the Oak, of each an Ounce, Leaves of Agrimony, Maiden-hair, Oak of Hieruſalem, ground Ivy, of each a handful, Carthamus-ſeeds an Ounce, Roots of Florentine Orris half an Ounce: Boil them in four pounds of fountain water till a third part be conſum'd, then add to the ſtraining Sena Leaves an Ounce and a half, Agarick two Drams, Mechoacan, Turbith, of each half an Ounce, yellow Saunders a Dram and a half, Roots of the leſſer Galingal a Dram: Boil them cloſe cover'd for two hours, then ſtrain it, add of the beſt Honey two Ounces, and Clarify it with the white of an Egg: Make a Purging Hydromel, the Doſe is from ſix Ounces to eight in the Morning, twice or thrice a Week. Or,

Take Calamelanos a Scruple, Roſin of Jalap half a Scruple, Balſam of Peru what ſuffices: Make four Pills, let them be taken in the Morning, repeating the Doſe within five or ſix days.

Take Tincture of Sulphur three Drams, give from ſeven drops to ten going to Bed, and early in the Morning in a ſpoonful of the following Mixture, drinking after it three ſpoonfuls.

Take the waters of Snails, Earth-worms, and Compound Radiſh water, of each four Ounces, water of the Juice of Elder-berries fermented a pound, Syrup of the Juice of ground Ivy two Ounces,: Mix them, make a Julape. Or,

Take Tincture of Gum Ammoniacum, or of Galbanum: Give to twenty drops at Night, and early in the Morning with the ſame Mixture. Or,

Take Millepedes prepar'd two Drams, Flowers of Sulphur two Scruples, Flowers of Benzoin a Scruple, Powder of wild Carrot, and Burdock-ſeeds, of each half a Dram, Venice Turpentine what ſuffices: Make a Maſs, form it into little Pills, take four at Night and early in the Morning, drinking after it a little draught of the ſame Julape.

At nine a Clock in the Morning, and five in the Afternon drink a draught of the water of Quick-lime Compound, to four Ounces, by it ſelf, or with ſome other appropriate Medicine.

For ordinary drink take the following Bochete.

Take Roots of Sarſaparilla ſix Ounces, China two Ounces, the Woods of white and yellow Saunders, of each ſix Drams, Shavings of Ivory and Hartſhorn, of each three Drams, Roots of Calamus Aromaticus half an Ounce, Raiſins ſton'd half a pound, Licorice three Drams: Let it infuſe according to Art, and boil it in twelve pounds of fountain water to ſix pounds, ſtrain it.

I was call'd to a young Scholar at *Oxford*, who had been ill for three Weeks of a pain of his *Thorax*, and of a great difficulty of Breathing that conſtantly followed him in the Evening,

ing, which alſo upon a quick motion of his Body, or his going up a ſteep Aſcent tormented him above meaſure; he could not reſt long on either ſide, but was forc'd to lye always on his Back, and with his Head raiſed: And if he try'd to lye on either ſide, preſently a pain followed the Poſition of his Body; and if haply he rolled himſelf from one ſide to the other, the pain alſo being preſently remov'd, he felt as it were waters floating from one place to another: So if he let his Body hang downwards over the Bedſide, he preſently felt waters falling towards his *Clavicular Bones*. Moreover, if at any time his Body was heated more than ordinary by motion, the heat of a Bed, or of a Fire, preſently he felt in his Breſt a boiling as it were of waters on the Fire, and at the ſame time complained of a Giddineſs, and of a little fainting of his Spirits. Being well ſatisfied by a due conſideration of theſe things that he had a Dropſie of the Breſt, I preſcrib'd the Method and Medicines following with ſucceſs.

Take Calamelanos fifteen Grains, Roſin of Jalap half a Scruple, Syrup of Roſes ſolutive what ſuffices, make three Pills. He took them early in the Morning, and had twelve Stools, which gave him great eaſe. Then again on the third day he had only four Stools by the ſame Medicine, though with greater relief to him than before. He took afterwards for many days of a Diuretick and Pectoral Apozeme ſix Ounces: And Laſtly, the ſame Purge being repeated, he grew perfectly well.

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SECT. 2.

Of Medicines regarding the Region of the Belly.

CHAP. I.

Instructions and Prescripts for the Cure of the Jaundise.

AS to the method of Curing this Disease, there are three Primary Indications, all which (since we are in a manner always at a loss which of them is the chiefest, and first to be put in Practise) must be prosecuted together: Therefore the Intentions of Curing must be. *First*, That the obstructions of the *Ductus's* must be open'd, if haply there are any either in the *Porus Biliarius*, or *Meatus Cysticus*, or elsewhere about the Liver, or Vessels that convey the Choler. *Secondly*, That the Blood be reduc'd to its due temper and *Crasis*, lest it engender Choler in too great a plenty, or render it unapt for separation. *Thirdly*, That the strength be upheld, and that the Symptoms chiefly prejudicing it be provided against.

1. To satisfy the First Indication, Cathartick evacuations both by Vomit and Seige are greatly conducing, with which the descent of the Choler towards the Intestines is Irritated, and the obstructed Vessels being by this means mightily agitated, are freed from their stoppages. *Secondly*, We must give Medicines that are smart, bitter, and salt, and others endow'd with a certain instigating vertue, which may sharply stir up the motion of the Gall gathered together in the Liver, and there stagnating. In this place also we must range such Medicines as are thought to be good against the *Jaundise* by a similitude of substance, and as it were by a Signature; *viz.* as being endow'd with a *yellow Juice*, though many of these because they move Urine or Sweat, may aptly enough be plac'd in the same rank with the former, *viz.* amongst evacuative Medicines.

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The Second Indication requires altering Medicines altogether, *viz.* ſuch as may depreſs the exaltations or wild efforts of the Sulphur and fixt Salt, and help to the reſtitution of the Volatile Salt which was depreſs'd before: For theſe purpoſes Medicines containing an Acid or Volatile Salt, and likewiſe Chalybeats will do excellently well: Hence *Spirit of Salt*, of *Vitriol*, *Juice of Limons*; alſo *Spirit of Hartſhorn*, and *Sheeps dung*, *Gooſe dung*, *Crocus Martis*, and other *preparations of it* of divers kinds, are often preſcrib'd in the *Jaundiſe* with good ſucceſs.

The Third Indication being for the ſupport of the ſtrength, and for removing Symptoms that prejudice it, ſuggeſts to us many and diverſifyed manners of Curing; but to avoid tediouſneſs, I ſhall only ſet down certain general Rules concerning Diet, and ſome Cordial and Anodine Remedies peculiarly proper in this caſe.

The Therapeutick Indications being thus laid before you, it remains for us now to adjuſt Select Medicines, *viz.* both ſimple and compound to each of thoſe Intentions before propos'd, and to explicate the manners and ways of operating of thoſe Remedies which are accounted of moſt note in this Diſeaſe: Firſt therefore we ſhall ſet before you the Forms of Evacuating Medicines appropriated to the Jaundiſe.

1. *Vomits.*

EMetick Medicines moſt commonly are of good effect in a new Jaundiſe, whilſt the tone and ſtrength of the *Viſcera* hold good; foraſmuch as they both eaſe the Ventricle of its offenſive load of viſcous Phlegm, with which its in a manner always oppreſt in this Diſeaſe, and likewiſe by irritating the Veſſels which convey the Choler, and ſtrongly ſhaking the Ductus's of the Liver, they clear them of their ſtoppages, and bring the Choler to paſs by the ways it formerly was wont.

Take of the Infuſion of Crocus Metallorum, from half an Ounce to ſix Drams, Vinegar of Squills an Ounce, Oxymel ſimple half an Ounce: Make a Vomit to be taken with governance.

Sometimes it is proper to give the Evening before the following Mixture, as a preparation to facilitate the Vomiting.

Take Powder of the Roots of Aſarabacca, Fæcula of Aron Roots, of each a Scruple, Tartar vitriolated half a Scruple, Oxymel ſimple an Ounce: Mix them.

Take Sulphur of Antimony ſeven Grains, Scammony ſulphurated eight Grains, Cream of Tartar half a Scruple: Make a Powder, give it in a ſpoonful of Panada.

Take Nine Leaves of Aſarabacca; being ſlic'd and bruis'd, pour to them of Whitewine three Ounces, preſs forth the Juice, give it in the Morning with governance.

Take Cambogia prepar'd eight Grains, Tartar vitriolated ſeven Grains: Make a Powder.

Catharticks.

PUrging Medicines have place in this Diſeaſe, whether it be new or inveterate, *viz.* both that the plentiful ſupply of Excrements, be now and then clear'd from the firſt paſſages, and that the Veſſels that convey the Choler be ſtirr'd up to excretion.

Take Electuary of the Juice of Roſes three Drams, Rhubarb a Dram, Salt of Wormwood, Cream of Tartar, of each half a Scruple, Syrup of Rhubarb what ſuffices: Make a Bolus.

Take Roots of ſharp pointed Dock prepar'd an Ounce, tops of Sea Wormwood, and of the leſſer Centory, of each two pugils, Roots of Gentian and Turmerick, of each two Drams, yellow Saunders a Dram; boil them in a pound and a half of fountain water to a pound; towards the end, add of the beſt Sena ſix Drams, of the beſt Rhubarb three Drams, Agarick a Dram and a half, Coriander-ſeeds two Drams, Whitewine two Ounces; let them boil cloſe covered for two hours, then ſtrain it, and let it ſettle till it be clear: The Doſe is from four Ounces to ſix, with Syrup of Rhubarb an Ounce, water of Earth-worms three Drams: Make a Potion to be taken for three or four days together, or every other day.

In a weaker Conſtitution.

TAke Choice Rhubarb two Drams, Agarick Trochiſcated half a Dram, Cinnamon half a Scruple, Ginger half a Scruple: Make an Infuſion in Whitewine and Succory water, of each three Ounces, being cloſe cover'd and kept warm for three hours: In the ſtraining diſſolve Syrup of Rhubarb an Ounce, water of Earth-worms two Drams.

Take Rhubarb powdred, from half a Dram to a Dram, Salt of Wormwood a Scruple: Make a Powder,

Take

Take Pilulæ Ruffi a Scruple, Extractum Rudii half a Scruple: Make four Pills, let them be taken in the Morning with governance, repeating them within four or five days.

In the Third place follow *Deopilatives*, and theſe are *Diureticks*, or *Diaphoreticks*, of which alſo ſome are accounted Specificks for their Similitude of ſubſtance; theſe ſorts of Medicines both promote the ſeparation of the Choler from the Blood, and being ſeparated, force its way through the ſtraiteſt paſſages and Pores in the Liver: Moreover at the ſame time by fuſing the Blood, they cauſe its Seroſities and Bilous Excrements to be ſent forth in ſome meaſure by Sweat and Urine.

Take Elixir Proprietatis an Ounce, give twenty drops in the Morning, and at five in the Afternoon with a fit Vehicle: After the ſame manner, the Tincture of Antimony, or of Salt of Tartar are often given with ſucceſs; alſo Mixtura Simplex in a greater Doſe. For Vehicles alſo for the ſame Intention of Curing, Apozemes, diſtill'd waters and Julapes are proper.

Take Roots of the greater Celandine, ſtinging Nettles, Madder, of each an Ounce, tops of Sea Wormwood, white Horehound dry'd, Agrimony, Germander, of each a handful, Worm-ſeeds two Drams, ſhavings of Ivory and Hartſhorn, of each two Drams, yellow Saunders a Dram and a half, Coriander-ſeeds two Drams; boil them in three pounds of fountain water to two pounds, add of Whitewine four Ounces, and ſtrain it, add Syrup of Cichory with Rhubarb two Ounces, Water of Earth-worms an Ounce and a half: Make an Apozeme, the Doſe is from four Ounces to ſix twice a day.

Take Leaves of white Horehound dry'd, of the leſſer Centory, of each a handful, Roots of Gentian and Turmerick, of each three Drams, Cinnamon a Dram, Saffron half a Dram, being ſlic'd, let them be put into a Glaſs with White or Rheniſh Wine two pounds: Make a cloſe Infuſion, the Doſe is three Ounces.

To this place belongs the famous Anti-Icterick of *Geſner*.

Take Roots of the greater Nettle a pound, Saffron a Scruple: Bruiſe them well, and extract a Tincture with Whitewine, the Doſe is three Ounces in the Morning for four or five days.

Like to the former is that of *Fr. Joel. Take Roots of the greater Celandine ſlic'd two handfuls, Juniper Berries a handful, being bruis'd, pour to them of Rheniſh Wine a pound, and extract the Juice: The Doſe is four Ounces twice a day.*

The Juice of white Horehound is mightily commended by Dioſcorides *for the Cure of the Jaundiſe, and its Syrup by* Foreſtus.

Inſtead of the Elixir and other Chymical Liquors which are ordered to be taken in a very ſmall quantity to avoid nauſeouſneſs: You may give more ſucceſsfully *Electuaries*, *Powders*, and *Pills* to others of a ſtrong Conſtitution.

Take

Take Conſerve of Sea Wormwood, the outward yellow Coats of Oranges and Limons, of each two Ounces, Species Diacurcumæ an Ounce and a half, Powder of Ivory, yellow Saunders, the Lignum Aloes, of each half a Dram, Troches of Capers a Dram, Troches of Rhubarb half a Dram, Salt of Wormwood two Drams, with a ſufficient quantity of Syrup of Cichory with Rhubarb, make an Electuary; the Doſe is the quantity of a Cheſnut twice a day, drinking after it of the following Julape three Ounces.

Take Waters of the greater Celandine, Fumitory, Wormwood ſimple, and of Elder Flowers, of each five Ounces, Magiſterial water of Snails, Water of Earth-worms Compound, of each two Ounces, Sugar half an Ounce: Mix them, make a Julape. Or,

Take Roots of the greater Nettle, Angelica, Gentian, of each four Ounces, the greater Celandine entire ſix handfuls, Wormwood, Tanſie, both Southernwoods, of each four handfuls, the outward Coats of twelve Oranges, and of four Limons, Earth-worms prepar'd, Snails, of each a pound, Cloves bruis'd two Ounces, being ſlic'd and bruis'd, pour to them of Whitewine eight pounds, diſtil it with common Organs: Let the whole Liquor be mixt. Or,

Take Filings of Steel a pound, freſh Strawberries ſix pounds, put them in a glazed Pot and ſtir them together, and let them ſtand for a day, then add of the Roots of Engliſh Rhubarb ſlic'd a pound, the Rinds of four Oranges, being ſlic'd, pour to them of Whitewine ſix pounds, and diſtil them according to art: Let the whole Liquor be mixt: The Doſe of this and the former is three Ounces twice a day after the Electuary, or other Medicine.

Take Powder of the Roots of Turmerick and Rhubarb, of each a Dram and a half, Rinds of Caper Roots, Aſarum Roots, of each half a Dram, Extract of Gentian and Centory, of each a Dram and a half, Salt of Wormwood four Scruples, Seeds of Water-creſſes half a Dram, of Rocket half a Scruple, Elixir Proprietatis a Dram, Gum Ammoniacum diſſolv'd in a ſufficient quantity of Water of Earth-worms: Make a Maſs, Form it into little Pills, the Doſe is half a Dram Evenings and Mornings, drinking after it of the diſtill'd Water three Ounces.

Sylvius highly commends for the Cure of the Jaundiſe a *Decoction of Hemp-ſeeds in Milk, and a Solution of Soap.*

The Second Indication having regard to the altering, or due tempering of the Blood, that it engender Choler only in a moderate quantity, and duly ſeparate it, requires thoſe kinds of Medicines which depreſs the Sulphur and fixt Salt when too much exalted: For theſe ends, I know not by what chance or guidance Medicines endow'd with a Volatile Salt, as *Earth-worms, Snails, Millepedes,* nay *Lice,* the *Dungs* of *Fourfooted Beaſts,* and of *Fowl,* being introduc'd into Practiſe for Curing the Jaundiſe, are uſually

given

given not only by *Empyricks*, but likewiſe preſcrib'd by Phyſicians of the beſt account: Theſe ſometimes by themſelves, but oftner joyn'd with Evacuatives and Deopilatives enter the chief compoſitions of *Anti-ictericks*.

Fonſeca preſcribes *Goſlings Dung* gathered in the Spring time and dry'd, and alſo the *white Dung of Chickens*; the Powder of both which is given from half a Dram to a Dram, in a fit Vehicle.

Take Powder of Earth-worms prepar'd, Gooſe dung, of each three Drams, Ivory, yellow Saunders powdred, of each half a Dram, Saffron a Scruple: Make a Powder, divide it into ſix parts for ſo many Morning Doſes, with ſome Liquor fit for the purpoſe.

To the Anti-icterick Apozem and Tincture above preſcrib'd, Earth-worms; alſo Gooſe-dung, and Sheeps-dung, are uſefully added.

Take of freſh and live Millepedes, in number from fifty to a hundred, Saffron half a Scruple, Nutmegs a Scruple, being bruis'd together, pour to them of Celandine water four Ounces, water of Earth-worms two Ounces, wring it forth hard, and drink it: After this manner let it be taken firſt once, afterwards twice a day for a Week.

Its a vulgar and Empirical Remedy with our Country men to take Nine *Lice* alive in the Morning for five or ſix days, by which Remedy I have heard that many have been Cur'd when other things did no good; which certainly can give relief no other way but by reſtoring the Volatile Salt, which was depreſs'd in the Blood.

On the account of the ſame way of Curing, the *Flowers of Sal Armoniack*, the *Volatile Salts of Amber*, *Hartſhorn*, and *Soot*, and likewiſe their *Spirits* are often given with great ſucceſs in this Diſeaſe.

Take Powder of Earth-worms prepar'd two Drams, Species Diacurcumæ a Dram, Flowers of Sal Armoniack half a Dram, Salt of Amber a Scruple, Extract of Gentian a Dram, Saffron a Scruple, Gum Ammoniacum diſſolv'd in water of Earth-worms what ſuffices: Make a Maſs, Form it into ſmall Pills; the Doſe is three or four Morning and Evening, drinking after it of the Julape before written three Ounces.

Take Spirit of Hartſhorn ting'd with Saffron three Drams: The Doſe is from fifteen drops to twenty, with the diſtill'd water above mention'd.

In this rank of Medicines with which the Blood diſtemper'd with the Jaundiſe is intended to be corrected, *Chalybeats* alſo juſtly claim a place; for theſe give a conſiderable relief in the Jaundiſe, as well as in other Cachectical Diſtempers, not ſo much by opening the obſtructions of the *Viſcera*, as by depreſſing the exaltations of the Sulphur and fixt Salt, and by volatilizing the Blood.

There-

Therefore to the Decoction, Tincture, or Infuſion above written, the Filings of Iron, or its Powder prepar'd (its Mineral Texture being ſome way looſen'd) or its Vitriolick Salt extracted, may be properly added; for hence it is that our Mineral waters ſometimes cure even to a Miracle ſuch as are quite given over in the Jaundiſe: Though theſe waters when drank in a very large quantity, paſſing through all the Veſſels, open alſo all the *Ductus's* of the Liver, be they never ſo much ſhut up.

Therefore alſo to the Electuaries, Pills and Powders before expreſt, preparations of Steel, ſometimes of one ſort, and ſometimes of another, may likewiſe be added in a fit proportion: Moreover, you may give to the quantity of a ſpoonful of its Syrup twice a day in three Ounces of the Anti-icterick Apozeme or diſtill'd water; alſo the Tincture of Steel to twelve or fifteen drops may be given after the ſame manner with good effect.

Laſtly, in this rank of altering Medicines, we ought to place thoſe which are ſaid to Cure this Diſeaſe, not as inwardly taken, but outwardly apply'd either by the touch, or being put into the Urine of perſons troubled with the Jaundiſe.

As to the Firſt, its a common Remedy with the vulgar to take a Tench, and apply it to the right Hypochondre, or to the Ventricle as ſome will have it, or according to others, to the Soles of the Feet of the Perſon that has the Jaundiſe, whence they expect the Diſeaſe to vaniſh in a ſhort time; though many promiſe a certain Cure by this means, yet it did not ſucceed with me, having ſometimes try'd it.

The other Cure of the Jaundiſe at a diſtance, is ſaid to be done by I know not what Sympathy, or ſecret manner of working.

Take the freſh Urine of the Patient made at one time, aſhes of the Aſh-tree ſearced what ſuffices: Mix them, and make it into a Paſte, and form it into three Balls of an equal bigneſs, and put them in a cloſe place near the Fire, or a Stove; when theſe Balls grow dry and hard, the Jaundiſe vaniſhes: After this manner I have known the Diſeaſe ſucceſsfully Cur'd when it was grown inveterate, and would not yield to other Remedies; this is a familiar practice with the vulgar.

The reaſon of this Operation is, that when the Lixivial Salt in the aſhes is mixt in the Urine, it preſently ſets free the Volatile Salt, which before was kept under in it, or entangled with other Particles, and at the ſame time that this is done in the Icterical Urine, it happens by Sympathy that the Volatile Salt alſo in the Blood of the Patient gets free from the Dominion of the fixt Salt and Sulphur, and conſequently the Icterical Dyſcraſy of the Blood vaniſhes:

vaniſhes: And thus *Phil. Grulingius* and *Felix Platerus* tell us that *Making Water on warm Horſedung has Cur'd many Perſons troubled with the Jaundiſe*, viz. inaſmuch as the fixt Salt of the Urine, and conſequently of the Blood of the Patient is altered by the Volatile Salt of the freſh Horſedung, and is reduc'd to its due temperature.

The Third and Vital Indication orders a fit Dyet, and likewiſe preſcribes Cordials and Anodines, both which are often wanted.

As to what concerns the Firſt, the Diet in this Diſeaſe is wont to be more Phyſical than in any other whatſoever: For Vegetables, and their parts, vulgarly call'd Hepatick Remedies, are boil'd in the Broaths of perſons troubled with the *Jaundiſe*; their Broaths alſo are uſually made of Worms and Snails (being accounted the Antidotes of the Jaundiſe) inſtead of other Fleſh: Moreover their Ale and other ordinary Drinks are Impregnated with an Infuſion of Phyſical things.

Take Roots of the greater Nettle, and of Strawberries, of each an Ounce and a half, Candied Eringo Roots an Ounce, ſhavings of Ivory and Hartſhorn, of each two Drams, Earth-worms cleans'd, in number twenty, a Cruſt of White-bread, Mace two Drams; boil all in two pounds of fountain water to a pound: Strain it through Hippocrates Sleeve, add to it Species of Diatrion Santalon half a Dram: Make a Broath, of which take from four Ounces to ſix twice a Day. For ordinary drink fill a little Veſſel of four Gallons with Ale, into which after it has wrought, put the following bag.

Take Tops of Sea Wormwood, and white Horehound dry'd, of each two handfuls, Roots of ſharp pointed Dock dry'd ſix Ounces, Bark of the Aſh-tree, and of the Barbery-tree, of each three Ounces, the outward Rinds of eight Oranges, and of four Limons, being ſlic'd and bruis'd, let them be prepar'd according to art.

Many Perſons in the Jaundiſe being troubled with a great weakneſs and frequent faintings, ſtand in need alſo of Cordial Remedies.

Take ſmall Aqua Mirabilis eight Ounces, Earth-worms four Ounces, Syrup of Orange Pills two Ounces: Mix them, the Doſe is two or three Ounces.

Moreover there are ſome who in this Diſeaſe are found ſubject now and then to very troubleſome pains, chiefly tormenting them by Night, and who are often moleſted with want of ſleep; wherefore *Anodines* alſo muſt here come in uſe.

Take Aqua Mirabilis, water of Earth-worms, of each an Ounce, Diacodium ſix Ounces, Tincture of Saffron half an Ounce: Mix them, the Doſe is a ſpoonful or two late at Night when there is want of ſleep.

Take Laudanum tartariz'd two Drams, Aqua Mirabilis two Ounces, Syrup of Clove Gilly-flowers an Ounce: Mix them, the Doſe is a ſpoonful after the ſame manner.

CHAP. II.

Inſtructions and Preſcripts for other Diſtempers of the Liver.

THe Liver often uſes to be faulty, eſpecially in one of theſe two things, *viz.* either intercepting the Nutritive Juice appointed for other parts, it applies it to its proper uſe, as its generally ſeen in Children troubled with the *Rickets*, and in many others leading a ſloathful and idle Life: Or Secondly, it too eaſily receives into its moſt inward Receſſes, the filthineſs of the depraved Blood, and all dreggy Excrements coming in its way, and retaining them does not only grow large, but is obſtructed in its Ductus's, whence oftentimes proceeds a Jaundiſe, or Dropſie, and tumours, and preternatural Concretions of divers kinds.

Therefore we muſt take care of theſe two things, *viz.* leſt the Liver by taking to it ſelf too much of the Nutritive Juice, grow to too great a Bulk, and leſt by retaining the filthy dregs of the Blood, it be troubled with obſtructions, and preternatural tumours.

Both theſe faults are much more eaſily prevented than Cur'd: For the former is effected only by taking care that the Blood being well conſtituted in its Craſis, and enjoying a free Circulation, both diſtributes the Nutritive Juice to the parts, and eſpecially the outmoſt, and driving all its Excrements to all their reſpective Emunctories depoſes them there: And indeed the Hepatick Medicines (vulgarly ſo call'd, though they regard the other *Viſcera* as well as the Liver) do firſt and more immediately exert their vertue by purifying the Blood, rather than by correcting the Liver, or other entrals; for entring the Blood, and being immiſcible with it, they ſo throughly exagitate it, that they make it diſcharge all its ſuperfluities by their proper Emiſſaries; and if any Medicines are found by ſome ſpecifick virtue, to have reſpect to one part more than to another, its becauſe their Particles being more ally'd, and conſequently aſſociated to the Recrements to be ſeparated

ted within that entral, are carried thither together with them: For this reaſon *Rhubarb*, *Turmerick*, the *greater Celandine*, and many other things ally'd to the Gall, readily paſs to its *Ductus's*, and are wont to do good in the Jaundiſe: We have before ſet forth the Energies and ways of operating of theſe Medicines: As to other Hepaticks commonly ſo call'd, we ſhall briefly ſet down certain Forms, Firſt of thoſe which are ſaid to prevent or remove the Non-natural accretion of the Liver, and then of thoſe which do the like, in reſpect of its obſtructions, and preternatural tumours.

1. Againſt the too great accretion, or diſproportionate nouriſhment of the Liver: Firſt, a ſpare and thin Dyet, ſhort Sleep, and frequent and moderate Exerciſes are proper. Wherefore if at any time Infants and Children are found obnoxious to this affect, as likewiſe to the Rickets, we order that they ſuck thin and ſerous Milk, that they are daily toſs'd in their Nurſes Arms, and carried from one place to another with a ſwift motion, or that they are put in a Chariot, or in a Chair, and ſwiftly driven to and fro, and that they learn to uſe their feet as ſoon as may be, and go about.

Take the Waters of Snails and Earth-worms, of each three Ounces, Syrup of Cichory with Rhubarb two Ounces, Spirit of Sal Armoniack with Gum Ammoniacum a Scruple: Mix them, take a ſpoonful at Night, and early in the Morning.

Take Roots of Male Fern, Chervil, Candied Eringo's, of each an Ounce, Leaves of Agrimony, Harts Tongue, Male Speedwel, of each a handful, ſhavings of Ivory and Hartſhorn, of each two Drams, white and yellow Saunders, of each a Dram, Raiſins ſton'd an Ounce and a half, Barly three Drams: Boil them in three pounds of fountain water to two pounds; to the ſtraining add the waters of Snails and Earth-worms, of each an Ounce and a half, Syrup of Cichory two Ounces: Make an Apozeme, take to two or three Ounces in a day.

Take Powder of white and yellow Saunders, Crabs Eyes, Lignum Aloes, of each half a Dram, Salt of Wormwood a Scruple: Make a Powder, the Doſe is from half a Scruple, to a Scruple twice a day.

Take Emplaſtrum Diaſaponis, Ceratum Santalinum, of each what ſuffices: Make a Plaiſter to be apply'd to the right Hypochondre.

Take Unguentum Splanchnicum two Ounces, Oyl of Wormwood an Ounce: Mix them, make a Liniment for the Region of the Liver.

The Remedies for moſt other Diſeaſes of the Liver, are either Simple or Compound: Amongſt thoſe of the former kind, are uſually reckon'd all Cichories, Sorrels, ſharp-pointed Docks, and

in a manner all Vegetables which have a ſort of bitterneſs joyned with ſomewhat of a ſmartneſs (in which the Deopilative vertue is ſaid to conſiſt) as Wormwood, Germander, Ground-Pine, Fumitory, Tanſie, Agrimony, Liver-wort, Lignum Aloes, all the Saunders, Tamariſk-bark, Aſh-bark, and the Roots of Capers, with many others which make up the greateſt part of Botanicks.

The fixt Salts of Herbs, and the Acid Spirits of Minerals claim a chief place amongſt theſe, becauſe they mightily agitate the Maſs of Blood, diſſolve its Concretions, clear its ſtoppages, and make it every where permeable in all its parts.

Its alſo manifeſt both by reaſon and experience, that preparations of Steel are often proper in Diſtempers of the Liver, as eſpecially in the Jaundiſe, and the Dropſy.

In the Antidotaries of the Ancients, we find a great many Phyſical Compoſitions which ſeem to be wholly deſign'd for the Liver, as the Electuary *è ſcoria ferri Rhaſis, &c.* But paſſing over theſe, I ſhall now give you ſome Forms and Examples of Medicines which are accounted Deopilatives, according to the practice of our times.

Therefore for an Opening Decoction.

TAke Roots of Fern, Chervil, the greater Nettle, Dandelion, of each an Ounce, Leaves of Agrimony, Harts Tongue, Speedwel, Oak of Hieruſalem, Liver-wort, of each a handful, white and yellow Saunders, of each three Drams, ſhavings of Ivory half an Ounce, Red Cicehs an Ounce, Coriander Seeds three Drams, Raiſins two Ounces: Boil them in four pounds of fountain water, to two pounds, adding about the end Whitewine four Ounces, ſtrain it through Hippocrates ſleeve; to which put Species Diarrhodon Abbatis a Dram, our prepar'd Steel two Drams: To the ſtraining add Syrup of Cichory with Rhubarb two Ounces, waters of Snails and Earth-worms, of each an Ounce: The Doſe is ſix Ounces twice a day, after a Doſe of the following Electuary.

Take Conſerve of the yellow Coats of Oranges and Limons, of each two Ounces, of Wormwood and Fumitory, of each an Ounce, Simple Powder of Aron Roots, Lignum Aloes, yellow Saunders, and Caper Roots, of each a Dram and a half, Crabs Eyes a Dram, Salt of Wormwood two Drams, Syrup of Fumitory what ſuffices: Make an Electuary, the Doſe is the quantity of a Wallnut twice a day, drinking after it a draught of the Apozeme before written, or of the following diſtill'd water.

Take

Take Leaves of Wormwood, Centory, Tanſie, both Southernwoods, Branches of Tamerisk, of each four handfuls, green Wallnuts four pounds, green Aſhen-keys two pounds, the outward Rinds of ten Oranges, and of four Limons, Snails, Earth-worms prepar'd, of each a pound; being all ſlic'd, pour to them of Whitewine eight pounds, diſtil it with common Organs: Let all the Liquor be mixt, the Doſe is three Ounces, ſweeten it with Sugar, or ſome proper Syrup.

If a Form of Pills be more grateful; the following Ecphractick Extract (as the Shops call it) ſeems good.

Take white and clear Tartar, and freſh Filings of Iron, of each four Ounces, let them be bruis'd together into a Powder, then boil it in four pounds of fountain water, to two pounds, (ſome uſe Whitewine) to the ſtraining add tops of Centory, Sea Wormwood, and Carduus, of each a handful, Gentian Roots half an Ounce, Species Diacurcumæ a Dram and a half; let them boil cloſe cover'd for three or four hours, then ſtrain it, and let the ſtraining evaporate by a gentle Bath heat, to a conſiſtency for Pills, adding if you pleaſe, Troches of Rhubarb, or Species of Hiera Picra two Drams: The Doſe is from a Scruple to half a Dram made into Pills, in the Evening with a fit Vehicle.

For the ſame intent, *viz.* to prevent or remove obſtructions of the Liver, a Purging Phyſick Ale to be taken Spring and Fall for many days, is highly extoll'd by ſome, and diligently us'd by certain Perſons every year during their Lives.

Take Roots of ſharp pointed Dock prepar'd, and of Polypody of the Oak, of each three Ounces, Madder two Ounces, Engliſh Rhubarb two Ounces, Leaves of Sena four Ounces, Epithymum two Ounces, yellow Saunders an Ounce, Seeds of Carthamus and Coriander, of each an Ounce and a half, being ſlic'd and bruis'd, Make a Bag according to art for four Gallons of Ale, after ſix days take to twelve Ounces more or leſs in the Morning, by which you may expect four or five Stools, Sine Regimine.

CHAP.

CHAP. III.

Inſtructions and Preſcripts for Curing the Dropſie call'd Aſcites.

THe Dropſie call'd *Aſcites*, is a tumour of the Belly, caus'd by a Watery Humour contain'd within its Cavity; which Humour probably is the *Serum* of the diſſolv'd Blood, diſtilling forth of the Cæliack and Meſenterick Arteries into the Cavity of the *Abdomen*, and eſpecially if it happens, that Scirrhous Tumours, Glands, little Swellings, or other præternatural Concretions are rais'd about the Meſentery, Liver, Spleen, Womb, or other Viſcera of the Belly; for the Circulation of the Blood being ſtopt in thoſe places, the Serous part of it is forc'd from the reſt, and falls into that Cavity, and commonly the Nutritive Juice goes with it, wherefore when this Region ſwells, the Members are uſually extenuated.

Nevertheleſs the Blood is not always diſſolv'd in an *Aſcites*, as it is in an *Anaſarca*, but is ſometimes too compact in its *Craſis*, yet ſo that its forc'd by reaſon of the Obſtructions of the Viſcera, to depoſe within the Abdomen its Salt Serum, which it could not evacuate by the Pores of the Skin, and the Urinary paſſages.

Its alſo likely that the Lacteous or Lymphatick Veſſels being ſometimes broken or opened, fill the *Abdomen* with a Maſs of Water or Chyle.

I conceive alſo that this Inundation of the Belly, may ſometimes ariſe from the Nervous Liquor, diſtilling gently and inſenſibly from the Fibres and Membranes: And likewiſe from vapours condens'd within the Cavity of the Body.

Concerning the Cure of the *Aſcites*, we muſt conſider by how many poſſible ways and manners, waters gathered together within the *Abdomen* may be evacuated: And we find that the Remedies, which according to the ordinary practice of Phyſick, are accounted Hydroticks, work that end by Purging, by Evacuation by Urine, by Sweating, and by inſenſible tranſpiration, and with ſome Perſons you muſt proceed this way, and with others that, or the other; and if neither of theſe ſeem poſſible, or ſucceed well, you muſt timely think of an Inciſion. I ſhall now conſider each of theſe ways.

First

Firſt therefore Catharticks ſeaſonably given, often abate the Tumour of an Aſcites, and ſometimes wholly take it away; for aſmuch as their Particles irritating the Ventricle and Inteſtines, diſcuſs the Contents and Flatus's of thoſe Viſcera, and likewiſe the humours ſticking in their Tunicles and Glands, and heap'd together in the Veſſels and Ductus's of their neighbouring parts, and force them partly into the Ductus's of the Inteſtines, and partly ſend them into the Maſs of Blood: But it does not ſucceed thus, if at any time this Diſeaſe proceeds from a *Lympha*, floating within the Cavity of the Abdomen, or from an Inflation or Tympanitical extention of the Membranes; becauſe Hydragogues carry forth little or nothing of thoſe waters, and if they are ſtrong, exaſperate and increaſe the Flatulent Diſtemper. Catharticks accounted Hydragogues, are either Emeticks or Purgers.

1. The *Hydragogue Emeticks* of chiefeſt note, are *Gum Gutta*, *Eſula or Cataputia*, and diverſified preparations of them: Alſo *Hercules Bovii*, & *Pilulæ Lunares*.

2. The *Purgers* are *Elder*, and *Dwarf Elder*, *Sea Bindweed*, *Hedge Hyſſop*, *Juice of Orris*, *Elaterium*: I ſhall briefly ſet down certain Forms and manners of preſcribing, compounding, and giving each of theſe.

1. *Gum Gutta* is highly extoll'd for Purging Serous humours; but in regard being given by it ſelf, it mightily diſturbs the Stomack, and often weakens it, therefore to repreſs a little its exceſſive and violently Emetick force, various ways are contriv'd for preparing it; but its beſt of all corrected with an Acid Spirit, or with an Alchaliſate Salt, or by throughly tempering and compounding it with Aromaticks.

Adrian Mynſicht commends its Magiſtery, which is made by diſſolving it with Spirit of Wine, and then by drawing it off, and precipitating it with fountain water; alſo by diſſolving it with Spirit of Wine Vitriolated, and Ting'd with Roſes and red Saunders, and then by evaporating it, others prepare it with the fume of Sulphur after the manner of Scammony Sulphurated: Others grind it on a Marble, moiſtning it with Oyl of Cinnamon, or of Cloves, or other Chymical Aromaticks: I uſe moſt its *Solution, made with the Tincture of Salt of Tartar: The Doſe of which is from fifteen Drops to twenty or thirty.*

Take Gummi Gutta ſix Grains, Mercurius Dulcis fifteen Grains, Conſerve of Violets a Dram and a half: Mix them, make a Bolus.

Take Gummi Gutta twelve Grains, Salt of Wormwood ſix Grains, Oyl of Mace a Drop, Conſerve of Damask Roſes a Dram: Make a Bolus. And its wont to be given with Tartar Vitriolated, or Cream of Tartar, and powder of Rhubarb.

Take

Take Gum Gutta ſulphurated or vitriolated fifteen Grains, Cream of Tartar half a Scruple, Extract of Rhubarb a Scruple, Oyl of Cinnamon two Drops: Make four Pills.

A Woman of late being ill of a dangerous *Aſcites*, and as it ſeem'd to me in a deſperate condition; by taking the following Medicines for ſix days ſucceſſively, grew much better, and in a ſhort time after perfectly recovered.

Take Gum Gutta powdred twelve Grains, Oyl of Cinnamon a Drop, Syrup of Buckthorn what ſuffices: Make a Bolus, let the Doſe be encreas'd every day, by riſing from twelve Grains to twenty.

Take of our Tincture of Gum Gutta a Scruple, water of Earth-worms an Ounce, Syrup of Rhubarb half an Ounce: Mix them, give it Cum Regimine.

Though there are various kinds of the *Spurges*, and all of them work violently by Vomit or Siege, by reaſon of their mighty Irritation of the Viſcera, and conſequently evacuate Serous humours in a plentiful manner; yet becauſe of the exceſſive ſtrength of moſt of them: The *leſſer or wild Spurge*, is now in a manner only in uſe: And its moſt approved preparations are the *Powder of the Rinds of its Roots, and its Extract*; We alſo add its Tincture, which is not Inferiour to the reſt.

Take the leſſer Spurge, with the Roots cleans'd four handfuls, Lignum Aloes, Cloves, of each a Dram; being bruis'd, boil them in four pounds of fountain water till half be conſum'd; let the ſtraining Clarifie by ſettling in an oblong Glaſs, then let the clear Liquor Evaporate by a Bath-heat to the conſiſtency of an Extract: The Doſe is a Scruple.

Take of this Extract half an Ounce, pour to it in a Matras ſix Ounces of the Tincture of Salt of Tartar, digeſt them in a Sand Bath till the Tincture be Extracted: The Doſe is from twenty to thirty Drops, with a fit Vehicle.

Take Powder of the Roots of the leſſer Spurge, from ſeven Grains to ten, Cinnamon half a Scruple, Salt of Tartar eight Grains; bruiſe them together in a Glaſs Mortar, give it by it ſelf, or with the Addition of ſome fit Conſerve or Syrup: Make a Bolus or Pills.

3. *Præcipitatum Mercurii cum Sole, or Hercules Bovii*; For as much as by its Acrimony, it mightily irritates the Fibres of the Stomack, and fuſes the Blood by reaſon of its Mercurial and Saline Particles, it raiſes a violent Vomiting, and ſo forces a diſcharge of the Serous humours, which are violently drawn into the Cavities of the Viſcera.

Pilulæ Lunares, in like manner by reaſon of the Vitriolick Particles of the Silver, being ſharpen d with other Saline Menſtruums produce the like effect, *viz.* by much corrugating the Fibres of

the

the *Viſcera*, they ſtrongly force the Serous humours into their Ductus's, and cauſes them to be evacuated.

A Solution of Silver being made in Aqua Stygia, and well purified, is reduc'd by a gentle evaporation into clear Cryſtals; which by themſelves (or with the addition of Sal Nitre to repreſs the force of the Lunar Vitriol) are made into Pills with the Crum of Bread: The Doſe is ſometimes a ſingle Pill, ſometimes two or three according as they work, and as the ſtrength will bear, theſe ſorts of Medicines are ſometimes given with ſucceſs in a ſtrong Conſtitution, and where the Viſcera are ſound, and of a good habit; but ſcarce ever have a good effect in tender and Cachectical Bodies, and are ſeldom taken by ſuch perſons without doing them hurt.

Hydragogue Medicines which work meerly or chiefly by Seige, are either mild, as *Elder, Dwarfe Elder, Sea Bindweed, and the Juice of Engliſh Orris*, which are rarely given by themſelves, but want to be quicken'd by ſuch as are ſmarter, and for return they qualify the vehemency of the other; or they are ſtrong, as *Hedg-Hyſſop, Jalap, and Elaterium.*

The *Seeds of Elder and Dwarfe Elder*, being dry'd and powdred, and taken to a Dram, gently evacuate Serous humours by Seige; a *Water and Spirit* are diſtill'd from the Juice of both their Berries fermented, and *Robs* and *Syrups* are made of it; which with many other preparations of thoſe Vegetables are highly extoll'd for all Hydropical Diſtempers.

Sea Bindweed, and Hedg-Hyſſop, are now rarely us'd by themſelves, but often enter the Compoſitions of other Hydragogues, and chiefly in Apozemes.

The *Juice of Engliſh Orris* is a good Medicine, and the more to be eſteem'd becauſe eaſie to be had for poor people: Its given from ſix Drams to an Ounce and a half, or two Ounces, either by it ſelf in a fit Vehicle, or with other proper ingredients. *Jalap* is a well known and vulgar Medicine againſt all ſorts of Dropſies. Every ordinary Man that has that Diſeaſe, preſently takes a Pennyworth of the Powder of Jalap, with a little Ginger in Whitewine; and this Medicine taken a pretty many times ſeldom fails of ſucceſs.

Elaterium is juſtly accounted a moſt powerful Hydragogue, in regard that moſt powerfully irritating the Fibres of the *Viſcera*, and at the ſame time fuſing the Blood and humours by a ſort of corroſive vertue as it were, it forces whatſoever Seroſities the Tunicles of the *Viſcera*, Membranes, and Veſſels; alſo thoſe that the Glands and Fleſh contain within them, to diſcharge themſelves into the Cavities of the Stomack and Inteſtines: Which Medicine working well, ſometimes the ſwelling of the Belly falls. This indeed is the chief Inſtrument of the *Empyricks Arſenal* againſt

an *Aſcites*, though uſing it in all caſes, they oftner give it to the prejudice of the Patient, than to his advantage: The Doſe is from three Grains to ten or fifteen. Its taken either by it ſelf, only with the Addition of Aromatical Correctives, or its given with other Hydragogues in the Form of a *Powder*, *Pills*, or of an *Electuary*: Its *Tincture and Eſſence* are Extracted with Spirit of Wine, or with Tincture of Salt of Tartar.

Theſe are the chief ſimple Hydragogues, of which being duly prepar'd with the Addition of other things, divers ſorts of Compounds are made, ſome common in Shops, others Magiſterially preſcrib'd, and are every where in uſe, and a great many more may be ordered *ex tempore* on occaſion. We ſhall here ſet down ſome few Select Forms of them, and eſpecially ſuch as are taken in the Form of a *Potion*, *Powder*, *Electuary and Pills*.

Take Roots of Dwarfe Elder, and Engliſh Orris, of each an Ounce and a half, Leaves of Sea Bindweed, and Hedge Hyſſop, of each a handful, Roots of Aſarabacca and wild Cucumbers, of each two Ounces, Roots of the leſſer Galingal ſix Drams, choice Jalap half an Ounce, Elaterium three Drams, Cubebs two Drams, being ſlic'd and bruis'd, pour to them of ſmall Spirit of Wine Tartariz'd three pounds; let them digeſt cloſe luted in a ſand Furnace for two days, ſtrain off the clear, which being purified by ſettling; give from two ſpoonfuls to three with a fit Vehicle.

Take Elaterium, Sea Bindweed, Ginger, of each a Scruple, Galingal, Cloves, Cinnamon, of each half a Scruple, Salt of Tartar fifteen Grains: Make a Powder for two Doſes.

Take Powder of the Roots of the beſt Jalap a Dram, Ginger a Scruple, Cream of Tartar fifteen Grains: Make a Powder, give it in a draught of Whitewine.

Take Rhubarb powdred a Scruple, Elaterium five Grains, Tartar vitriolated half a Scruple, Spike three Grains, with Syrup of Buckthorn: Make four Pills.

Take Pilulæ Aloephanginæ half a Dram, Elaterium half a Scruple, Oyl of Cloves three drops: Make four Pills.

Let the Hydropick Pills of *Bontius* be given from half a Scruple, to half a Dram: They are made after this manner.

Take of the beſt Aloes two Drams and a half, Gummi Gutta prepar'd, a Dram and a half, Diagredium corrected a Dram, Gum. Ammoniacum diſſolv'd a Dram and a half, Tartar vitriolated half a Dram: Make a Maſs, and form it into Pills.

Certain Hydragogue Electuaries, are now every where much in uſe amongſt Practitioners; and eſpecially one given us by the famous *Sylvius*, and another by *Zwelfer*. This that follows likes us well.

Take

Take Roſin of Jalap two Drams, Tartar vitriolated a Dram, Extract of Rhubarb two Drams, of Eſula a Dram and a half, Roots of the leſſer Galingal a Dram, bruiſe them very well: And laſtly add Conſerve of Engliſh Orris Flowers four Ounces; and with a ſufficient quantity of Syrup of Peach Flowers Make an Electuary, the Doſe is from half a Dram, to a Dram and a half, or two Drams.

I might here give you many other Purging Hydragogues, but Catharticks do not always Cure the *Aſcites*, nay they often make it worſe, and (if you inſiſt too long upon them) render it Incurable. Therefore now let us enquire whether Diureticks will do good in this caſe or not.

And truly any Man might eaſily be induc'd to believe that Medicines provoking Urine, contribute very much towards the Evacuation of Waters from any part or Cavity of the Body: In reality its manifeſt by frequent experiments, that they often Cure the *Anaſarca*, and give relief in it before all other Remedies: Let us ſee therefore what they can do for draining the Cavity of the *Abdomen*.

As to this, its manifeſt in the firſt place, that there is no immediate paſſage open from the Aſcitical Maſs of Waters to the Reins, how near ſoever they lye to them; but whatſoever waters are conveyed from that Maſs to the Reins, muſt of neceſſity be firſt of all drank up again into the Blood, and be thence diſcharg'd into that receptacle of the Urine: Now how little is it that the ſmall Mouths of the Veins (if haply any of them are open) can receive? And this is that only thing which Diureticks are able to perform, *viz.* By fuſing the Blood, and driving its Seroſities to the Reins in a plentiful manner, to make it draw to it ſelf, being ſo drein'd, the Waters floating in the Belly. In the mean time there is no leſs danger leſt Diureticks unſeaſonably given, whilſt they fuſe the Blood too much, drive the Serum, which is forc'd to part from it, into the watery Maſs of the Aſcites, more than into the Reins, and ſo rather to increaſe than remove that deluge of the Belly. And truly I have frequently obſerv'd that this ſometimes happens; and 'tis for this reaſon that the Ancients always mixt Aſtringents and Corroboratives in their Medicines for the Dropſie, not that ſuch (as is vulgarly ſaid) ſtrengthen the tone of the Liver, but preſerve the Craſis or Mixture of the Blood from being wholly diſſolv'd by too much fuſion. Therefore in an *Aſcites* which happens chiefly, or in part, by reaſon that the Serous humour ſtuffs and mightily ſwells the Compages of the Viſcera and Veſſels, and eſpecially the Tunicles, Glands and Fibres themſelves, and the ſpaces betwixt them; even as Cathartieks are proper, ſo are alſo Diureticks, and are often taken with ſucceſs, for as much as by the uſe of theſe, the

Maſs of Blood is drein'd (the Serum being deriv'd to the Reins in a plentiful manner) and readily receives into it ſelf thoſe waters every where ſtagnating about the Mouths of the Veſſels, and conveys them to the Urinary Common-ſhore: But on the contrary in a *true Aſcites* where the Textures of the Viſcera being free from ſuch ſtuffings with Serum, the filthy Maſs of Waters fills the Cavity of the Belly, Diureticks are given either to no purpoſe, or with prejudice, becauſe they fetch out nothing of the water ſtagnating in the Belly, and very often by fuſing the Blood, drive the waters more violently thither, being apt to diſtil into it of their own accord.

In an *Aſcites* all Diureticks of every kind are not equally proper, nor ought to be indifferently given; for it is to be obſerv'd, that Perſons troubl'd with this Diſeaſe make little Urine, which is alſo reddiſh, and reſembling as it were a Lixivium; which is a ſign that the Craſis of their Blood is ſo cloſe bound by reaſon of the fixt Salt and Sulphur being exalted and combin'd together in it; and conſequently that its Serum is not duly ſeparated within the Reins, which nevertheleſs is thrown off in the Involutions of the Obſtructed Viſcera, and ſo is depos'd in the Cavity of the Belly. Wherefore in this caſe we muſt give only thoſe things to move Urine, which ſo reſtore and correct the Conſtitution of the Blood, that the Irregularities of the fixt Salt and Sulphur being taken away, the Serous part may be ſeparated within the Reins, and ſent forth in a more plentiful manner: For which end not Acid or Lixivial things, but ſuch as are endow'd with a Volatile Salt are proper; for I have often obſerv'd in ſuch Patients, that when Spirit of Salt, and other Acid diſtill'd Liquors of Minerals, and when the Deliquia or Solutions of Salt of Tartar, of Broom, and of other things have rather done hurt than good; the Juice of Plantain, of Brooklimes, and of other Herbs abounding with a Volatile Salt; alſo the expreſſions of Millepedes have given relief: For the ſame reaſon Sal Nitre throughly purified, or Cryſtal Mineral has often a mighty good effect. You may find Forms of Medicines proper for this uſe in our preceding Tract, where we have ſet down Examples of Diureticks, in which both Volatile and Nitrous Salts are the Baſis: Moreover to this place belongs that notable Experiment with which *Johannes Anglus* ſays he often Cur'd an Aſcites from a hot Cauſe, which Medicine alſo the moſt experienc'd Phyſician Dr. *Theodore Mayern* uſually preſcrib'd in the like Caſe, and was wont to extol. It is as follows.

Take Juice of Plantain and Liverwort, and fill an earthen Pot with it to the Brim, then ſtop it very cloſe, and put it in a hot Oven as ſoon as the Bread is drawn, and make a gentle Fire round the ſides

of

of the Pot to continue the heat of the Oven; after it is boild ſtrain the Liquor, and being ſweeten'd with Sugar, let it be drank Mornings and Evenings, and it Cures.

In Imitation of this, I have often preſcrib'd with ſucceſs after the following manner:

Take green Plantain Leaves four handfuls, Liverwort and Brooklimes, of each two handfuls, being bruis'd together, pour to them of ſmall Compound Raddiſh water, or of ſome other Magiſterial water half a pound, wring it forth hard: The Doſe is three Ounces thrice a day.

Diaphoreticks though moſt efficacious in an *Anaſarca*, yet are of little or no uſe in an *Aſcites*; for being unſeaſonably given, they often cauſe a great prejudice to the Patient, without doing him the leaſt good, becauſe by heating the Blood they make the waters floating in the Cavity of the Belly, to grow fervid, and to boil as it were, ſo that the Spirits and Humours are mightily troubled by the Vapours thence rais'd, and ſo a diſorder of all the functions follows, and the Viſcera themſelves being ſodden as it were, are very much injur'd: Moreover when a Sweat is thus unduly rais'd, the Blood being forc'd to a fuſion and precipitation of Serum, diſcharges more yet into the watery Maſs of the Aſcites; therefore when ſome preſcribe Fomentations and Liniments to be apply'd to the ſwollen Paunch, and order Bathing, for the moſt part it falls out for the worſe to the Patients; for beſides Feveriſhneſs, a Head-ach, Vertigo, faintings of the Spirits, and other ill Symptoms of the Heart and Brain, moſt frequently caus'd by ſuch means, the Belly alſo ſwells the more by it, becauſe the Blood being agitated and diſſolv'd, depoſes the Serum there in a larger meaſure: Nay, and the Mouths of the Veſſels are thereby made more looſe and open, ſo that they diſtil forth waters faſter, they being now diſpos'd to part from the Maſs of Blood. The Remedies which are wont to be Adminiſtred with moſt ſucceſs, when we will not proceed to an Inciſion, are *Gliſters* and *Plaiſters*.

The former draw the Serum out of the Veſſels and Glands of the Inteſtines, and Meſentery, without fuſing the whole Maſs of Blood (which ſtrong Cathartick will do) which being ſo emptyed, receive into them ſome of the extravaſated Lympha; For this end the following Gliſter uſually preſcrib'd by us in the like caſe is mighty proper; in regard at the ſame time it irritates the Fibres of the Inteſtines, and draws the Serum imbib'd by the Blood, or before contain'd in it, to the Reins.

Take

Take Urine of a ſound Man that drinks Wine one pound, Venice Turpentine diſſolv'd with the Yolk of an Egg, an Ounce and a half, Sal Prunella a Dram and a half: Make a Gliſter, repeat it daily.

Plaiſters ſometimes do good in an *Aſcites*, but let them be ſuch as ſtrengthen the Viſcera by ſome reſtringent and comforting vertue, and help to cloſe the Mouths of the Veſſels, that they do not diſcharge the Seroſities in too great a plenty: For this end I uſually apply *Emplaſtrum Diaſaponis* to the ſwollen Belly with good ſucceſs. Or,

Take Emplaſtrum de minio, and Paracelſi, of each what ſuffices: Make a Plaiſter to be apply'd to the Belly. If at any time this Diſeaſe be complicated with a Tympany, other ſorts of Epithems are proper, as we ſhall declare hereafter.

The great and moſt preſent Remedy for an Aſcites, is to make an Inciſion, and draw forth the water, tho this practice as often Kills the Patient, as Cures the Diſeaſe; wherefore there is need of great caution in what Perſons, and in what time of the Diſeaſe this ought to be attempted: In Cachectical Perſons, and ſuch as have been long ill, in whom the Conformation and temperament of the Viſcera are generally vitiated, it cannot prove of any good effect to let forth the waters by piercing of the Belly; for preſently upon it the Spirits faint, the ſtrength is diſſolv'd, nay and a freſh inundation of the Morbifick humour ſoon ſucceeds it: But thoſe who before having a good conſtitution of the Viſcera, and being ſound enough as to all other parts, fall into an Aſcites upon ſome great evident cauſe, as they need not preſently at firſt attempt an Inciſion, ſo they ought not to defer it long if it be judg'd requiſite. For upon a long delay the Viſcera which are immerg'd in the waters, and as it were ſodden in them, become incorrigibly vitiated.

Its beſides my purpoſe to deſcribe here the Adminiſtration of this Inciſion, whether it be perform'd the ordinary way, or according to the way of *Sylvius*, with a Perforated Needle. As Phyſicians ſeldom preſcribe this operation, they looking upon it as dangerous, ſo *Quacks* and *Empiricks* never conſulting them, attempt it very often inconſiderately and unproſperouſly. For concluſion, I ſhall here give you a relation of a true and terrible Aſcites lately Cur'd without an Inciſion.

A young Woman tall and ſlender, a Merchants Wife, giving Suck to her Child, drank both by day and by night to increaſe her Milk, an immoderate quantity of Ale, ſometimes plain, and ſometimes made into Poſſet-drink; after having us'd this ill way of Diet for ſix Weeks, ſhe fell ſuddenly into a cruel *Aſcites*, the beginnings of which ſhe never had minded; for her *Abdomen* being

being full of waters floating within it, ſwell'd mightily, and its Bulk when ſhe turn'd her ſelf from one ſide to the other, fell without the Ilia, and the borders of the reſt of her Body; in the mean time the Fleſh of all her Members was mightily conſum'd, and ſhe ſeem'd no leſs Conſumptive than Hydropical.

The Child being wean'd, and a better Diet ordered, ſhe entred upon Phyſick, and in the firſt place took gentle Hydragogues both Purging by Siege and Urine, but without any benefit, nay after all Purging ſhe was worſe: Afterwards being Committed to our care, and almoſt in a deſperate condition, I proceeded with her after the following method.

Having wholly forbidden her the uſe of Ale, and all other drinks but what were Phyſical, I preſcrib'd theſe things.

Take Leaves of Plantain, Brooklimes, Clivers, of each four handfuls, being bruis'd together, pour to them water of Earth-worms, and Radiſh-water Compound, of each three Ounces, wring it forth; ſhe took it twice a day, viz. *at eight of the Clock in the Morning, and at five in the Afternoon, ſhe continued the uſe of this Medicine a long time, but altered now and then the Compoſition, changing ſometimes the Herbs, ſometimes the Liquor to be poured to them.*

Take of the reddeſt Tincture of Salt of Tartar an Ounce and a half; ſhe took twenty Drops going to Bed, and early in the Morning in two ſpoonfuls of the following Julape, drinking after it ſeven ſpoonfuls.

Take water of the Flowers of Elder, and of Saxifrage, of each ſix Ounces, the waters of Snails, Earth-worms, and Radiſh Compound, of each two Ounces.

On her Belly ſhe wore a Plaiſter made of *Empl. de Minio, & Oxycroceo.*

The following Glyſter was given her firſt every day, afterward every other or third day.

Take Urine of a ſound Man a pound, Turpentine diſſolv'd with the Yolk of an Egg an Ounce and a half, Sugar an Ounce, Sal Prunella a Dram: Make a Gliſter.

By the conſtant uſe of theſe things, in ſix Weeks time the ſwelling of her Belly came down, but her fleſh daily falling away, a Conſumption was fear'd: Wherefore to prevent it, ſhe went into the Country and drank Aſſes Milk, and by the benefit of this nouriſhment and of the freſh Air, taking continually the above mention'd Medicines, ſhe recover'd perfectly within three Weeks or a Month, and lives ſtill, and is in good health.

CHAP.

CHAP. IV.

Inſtructions and Preſcripts for Curing the Tympany.

A Tympany may be thus defin'd, or at leaſt deſcrib'd, *viz.* that it is a fixt and continued tumour of the *Abdomen*, equal, hard, ſtiff, yielding a ſound upon ſtriking, taking its riſe from a ſort of Convulſive Inflation of the Membranous Parts and Viſcera, by reaſon of the Animal Spirits being driven into thoſe Fibres in too great a plenty, and there hindred from a Receſs, through the fault of the Nervous Juice obſtructing it: To which affect a gathering of Winds in the empty places is conſequently added for compleating it.

That we may have timely notice of its beginning, we muſt underſtand that there are ſome previous affects which diſpoſe to it, as eſpecially a Hypochondriack, Colick, Hyſterick, and ſometimes an Aſthmatick diſpoſition: And if after frequent returns of Fits in any of theſe Diſtempers, a tumour of the Abdomen follows, though never ſo ſmall at firſt, a Tympany is preſently to be fear'd.

A Tympany ſeldom kills of it ſelf, but after it has continued a long time, to make more ſure work, it joyns to it ſelf at length an Aſcites as a forerunner of death.

In order to the Cure of a Tympany, as in moſt other Diſeaſes, there are three primary Indications, whereof the firſt and always the moſt preſſing being Curatory, endeavours to remove the tumour of the Abdomen, by recalling the Animal Spirits from that Convulſive extention, and reducing them to order: The Second being preſervatory, keeps thoſe Spirits or others from inordinate excurſions into the Nervous Fibres of the Belly, and at the ſame time corrects the faults of the Nervous Liquor accompanying them, as to its Craſis or Motion: The Third is Vital, and by removing the Symptoms that are moſt preſſing, relieves and upholds as much as may be all the functions that are oppreſt or weakned.

The Firſt Indication is always of chiefeſt moment, the whole ſtreſs of the Cure conſiſting in it, but its very difficult to be perform'd: For it does not readily occur to us with what remedies or ways of Adminiſtration it ought to be attempted. Bleeding has no place here, but in a manner always is ſhun'd as hurtful; alſo Catharticks for as much as they irritate the affected Fibres,

and

and trouble the Spirits, and drive them more violently into those Fibres, do rather increase than diminish, or Cure the tumour of the Belly: So likewise Diaphoreticks force the Spirits together with the Morbifick Particles deeper into those Fibres, from which they ought to be summon'd forth and withdrawn. The chief means of Cure seems to be plac'd in the use of Diureticks and Glisters; and great things are likewise expected from Topicks, because they are apply'd more immediately, and by contact to the Disease it self, and because we see they excellently dissolve or discuss tumours in other places; but all dissolvents are not proper here, even though in other tumours they are very Medicinable: For those that are hot, being accounted discussors, most commonly rather do hurt than good in a Tympany, whether they are us'd as a Fomentation, or Liniment, or apply'd in the Form of a Cataplasme or Plaister: For they both open and dilate the Ductus's of the Fibres, so that they lye more open to the Inroads of the Spirits; and at the same time rarify the Particles sticking in them, so that they coming to occupy a greater space, the Inflation and Swelling of the Belly is augmented. Lastly as to Alteratives, even of those which do good against other affects of the *Genus Nervosum*, only some few are proper in a Tympany; for where the Morbifick matter sticking within the strait Ductus's cannot be driven forwards or quite through, Elastick Medicines, by fastning the matter deeper, render the obstruction still greater or more fixt: Wherefore the Spirits of Hartshorn, Soot, Sal Armoniack, and so Tinctures, Elixirs and other Medicines endowed with a Volatile Salt, or Particles otherwise active, do not only cause a very troublesome heat and drought in persons troubled with a Tympany, but also make the Abdomen swell more, because they trouble the Spirits, and fuse the Blood and Nervous Juice, so that the Particles deposed by each of these are forc'd into the parts affected.

Notwithstanding Physick can do so little against this Disease we must not cease to move every stone in order to Cure, or give ease to the Patient: Therefore in the First place (because it is the Custom to begin with Evacuatives) though strong Catharticks always do hurt, and the more gentle are scarce ever able to carry off the Conjunct Cause; yet these latter, for as much as they withdraw somewhat of that which feeds the Disease, and prepare the way for other Medicines to exert their Energies more freely, ought to have their turns in the Practice of Physick, *viz.* once in six or seven days; and at other times let Glisters (the use of which is much better) be frequently Administred: Hydroticks being forbidden, let moderate Diureticks be diligently plyed, to which at the same time let such things be

joyn'd which regard the altering and reducing of the Spirits and Humours, which truly make up the chiefeſt part of Pharmacy for a Tympany: Moreover in the mean time let not the uſe of Topicks be neglected. We ſhall ſet down certain Select Forms of Medicines appropriated to each of theſe ends: For a Medicine gently looſening, uſe the Laxative Wine preſcrib'd for a Tympany by the famous *Greg. Horſtius* in the Fourth Book of his Obſervations, Chap. 30. or inſtead of it, let the following be preſcrib'd in a ſhorter Form.

Take Flowers of Peaches, and of Damask Roſes, of each two Pugils of Broom, Elder, and the leſſer Centory, of each a Pugil, Leaves of Agrimony and Sea Wormwood, of each a handful, of the beſt Sena an Ounce, Rhubarb ſix Drams, Carthamus-ſeeds half an Ounce, of Dwarf-elder two Drams, yellow Saunders three Drams, Galingal Roots two Drams, being ſlic'd and bruis'd, ſew them up in a Silken Bag, and put it in a Glaſs with two pounds of Whitewine, Saxifrage water a pound, Salt of Tartar a Dram and a half; let them ſtand for forty eight hours, then let the Patient begin to drink it, taking about four or ſix Ounces every third or fourth day.

In a hotter conſtitution let the following Form be given, which I have ſometimes try'd with good ſucceſs.

Take of Purging Mineral waters eight pounds, Salt of Wormwood two Drams, let it evaporate with a gentle Bath-heat to two pounds: To this I uſe to add of water diſtill'd from Purgers with Wine four Ounces: The Doſe is from four Ounces to ſix.

Or to that Liquor evaporated to two pounds, add of the Roots of Mechoacan and Turbith, of each half an Ounce, Rhubarb ſix Drams, yellow Saunders two Drams, Cloves a Dram: Let there be a cloſe and warm digeſtion for two hours filter it warm through lawn paper, the Doſe is three or four Ounces.

Gliſters are of frequent uſe in this Diſeaſe, becauſe they looſen the Belly without any great irritation of the Fibres.

Take water of the Infuſion of Stone-Horſe-dung with Cammomile Flowers a pound, Honey of Herb Mercury two Ounces: After the ſame manner alſo let Decoctions or Infuſions be prepar'd of Dogs-turd with Carminatives.

Take of the Emollient Decoction a pound, Sal Prunella, or Sal Armoniack, from a Dram to a Dram and a half: Make a Gliſter.

Take of the Urine of a ſound Man a pound, Sal Prunella a Dram, Venice Turpentine diſſolv'd with the Yolk of an Egg an Ounce and a half: Make a Gliſter.

2. Diureticks, If any other Remedies, promiſe help in this Diſeaſe.

Take

Take live Millepedes cleans'd three Ounces, one Nutmeg ſlic'd, being bruis'd together, pour to them of the following Diuretick water a pound, expreſs it ſtrongly: The Doſe is from three Ounces to four twice a day.

Take of the green Berries of Juniper and Elder of each ſix pounds, Firr tops four pounds, green Wallnuts two pounds, Winters Bark four Ounces, the outward Rinds of ſix Oranges and four Limons, the Seeds of Ameos, Rocket, and Water-creſſes, of each an Ounce and a half, Dill-ſeeds two Ounces, being ſlic'd and bruis'd, pour to them of Whey made with Whitewine eight pounds, diſtil it with common Organs: Let all the Liquor be mixt.

Take Cryſtal Mineral half an Ounce, Volatile Salt of Amber two Drams, Powder of wild Carrot-ſeeds a Dram, Venice Turpentine what ſuffices: Take ſmall Pills, take three at Night, and in the Morning, drinking after it of the foreſaid water three Ounces.

Take ſweet Spirit of Salt half an Ounce, give from eight drops to twelve twice a day with a Draught of the ſame water, adding Syrup of Violets a ſpoonfull.

Take Spirit of Salt of Tartar an Ounce; give from a Scruple to half a Dram, twice a day after the ſame manner: So alſo Spirit of Nitre, and Tincture of Salt of Tartar may be given.

Take Leaves of Plantain, Chervil, and Clivers, of each four handfuls, being bruis'd together, pour to them of the former diſtill'd water a pound, expreſs it ſtrongly: The Doſe is three Ounces twice or thrice a day with ſome other Medicine.

Take Graſs Roots three Ounces, Roots of Butchers-broom two Ounces, Chervil and Candied Eringo's, of each an Ounce, ſoavings of Hartſhorn and Ivory, of each two Drams, burnt Hartſhorn two Drams and a half, Burdock-ſeeds three Drams; boil them in three pounds of fountain water to two pounds: In the warm ſtraining put Leaves of Clivers and Watercreſſes bruis'd, of each a handful, adding of Rheniſh Wine ſix Ounces; let there be a cloſe and warm Infuſion for two hours; then ſtrain it again, and add of the Magiſterial water of Earth-worms two Ounces, Syrup of the five Roots an Ounce and a half, make an Apozeme, the Doſe is four Ounces twice a day, with ſome other Medicine.

Whilſt theſe things are taken inwardly, let Topicks alſo, and outward applications be carefully Adminiſtred, not ſuch as are hot and diſcuſſing, but ſuch as are endow'd with Particles of a Volatile and Nitrous Salt, which deſtroy the combinations of the other Salts, and make void the efforts of the Spirits, for which ends we propoſe the following things: If Fomentations ought to be us'd at all, let them not be apply'd too hot, and let them not be prepar'd of the vulgarly call'd Carminatives, but chiefly of Salts and Minerals. *Cabrotius* (quoted by *Helmont*) ſays, he Cur'd a Perſon eighty years of Age, whoſe Belly he fomented

twice a day with a Lixivium, in which he boil'd Salt, Allum, and Sulphur, and after apply'd Cow-dung, for a Cataplasm, I use to prescribe as follows.

Take Flowers of Sal Armoniack an Ounce, Crystal Mineral two Ounces, small Spirit of Wine containing much Phlegm in it two pounds: Mix them, and dissolve them in a Glass.

Let a Woolen Cloath dipp'd in this warm, be apply'd on the whole Abdomen, and be chang'd now and then, dipping it afresh: Let it be done twice a day for half an hours space, afterwards let there be apply'd either a Cataplasm of Cow-dung, with the Powder of Dogs-turd, or the Plaister following.

Take Emplastrum Diasaponis, that is, of Minium with Venice Soap what suffices: Let it be thin spread on thin Leather, and apply'd to the whole Belly, renewing it within ten or twelve days.

The Second Indication requires chiefly altering Medicines, *viz.* such as put a stop to the Fermentations of the humours in the Viscera of the Belly, and to the wild Efforts, and irregular excursions of the Spirits, and which likewise procure the even mixtures and due motions of the Chyle and Nervous Juice: For which ends *Chalybeats* are principally us'd; and truly not only for this Disease, but for many others belonging to the Viscera of the Belly, it's usual to have recourse to Steel Medicines, though in the mean time many Empyricks confidently prescribing them, do not consider after what manner such Medicines work, or what alterations for the better may be expected from them: And indeed it very often falls out, that nature her self is destroyed, and not the Disease, when *Chalybeats*, of which there is a great variety, and of diversified Operations, are given without any distinction or choice, or without respect to the Temperament, Constitution, and state of the Disease in Patients.

We have treated elsewhere *ex professo* concerning Medicines prepar'd of Iron and Steel, and of their vertues and manners of working; so that it's needless to repeat the same here: As to this Disease, if any of them are proper for it, certainly they are not all: For those in which the Sulphur still remains, and being free, predominates over the other principles after that the texture of the mixt Body is open'd, must be wholly excluded from this number; for by their powerful fermentation, they greatly ferment the Juices of the *Viscera*, and put the Blood and Spirits in such a Commotion, that the whole Region of the Belly is puft up in a greater Bulk, as though some Spirit rush'd violently into it.

Nor are those more proper here, from which the Sulphureous Particles are wholly driven away with the Saline, as in *Crocus Martis* prepar'd by a very strong and long Calcination; for as this Medicine is good to stay all fluxions, so it fixes more

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any Impactions of Spirits and humours, and renders them more obſtinate.

But there remains a Martial Remedy of a middle kind, in which the Sulphur being wholly, or for the greateſt part expell'd, the Vitriolick Salt remains, and has for the greateſt part the Predominancy, as it has in a Solution of the Filings of Iron, or in its Infuſion either ſimple, or in Mineral waters, in Salt or Vitriol of Mars, in our preparation of Steel, with many others, preparations and compoſitions of which have been often found by experience to have done great good in ſome caſes; for theſe deſtroy the Exotick, and reſtore the Genuine Ferments of the Viſcera; open their Obſtructions, fix the Blood, and keep its Texture from much diſſolution: Wherefore Chalybeate Medicines, as alſo ſome other Alteratives have haply ſome effect againſt the Procatarctick and more remote Cauſes of a Tympany, but do little or no good at all againſt its Conjunct Cauſe.

Take of our Steel ground very fine two Drams, of the Diſtill'd water above written two Pounds, Syrup of the five Roots two Ounces, mix them in a Glaſs, and let it Clarifie by ſetling; the Doſe is three or four Ounces in the Morning and at five in the Afternoon.

Take Powder of Aron Roots, and of Crabbs Eyes of each three Drams, Chryſtal Mineral two Drams, Vitriol of Mars a Dram and a half, Sugar of Roſemary Flowers two Drams: Mix them, the Doſe is half a Dram, twice a Day with a fit Vehicle.

Hartman highly extolls the Liquor of the Flowers of the Herb Mullein as a Specifick Remedy in this Diſeaſe: *Put thoſe Flowers* freſh gather'd into an Alembick and preſs them in hard, *then the Veſſell being carefully ſtopt that nothing can breath forth, let it ſtand in an Oven whilſt bread is bak't, and afterwards the Flowers being taken forth preſs forth the Liquor very hard, and let it be Diſtill'd in* Balneo: *The Doſe is a Scruple in Decoction of the Seeds and Roots of Fennel.* Certainly if this Medicine can do any thing, it ought to be given in a greater Doſe.

Johannes Anglicus Commends the Electuary *Roſata Novella* with *Diatrion Santalon* and *Ants Eggs*; which Medicine truly being probable enough ſeems to promiſe ſomething: In Imitation of theſe I ſhall here propoſe the following.

Take Conſerve of the Flowers of Cichory and Indian Creſs of each three Ounces, Powder of Aron Roots, Lignum Aloes, yellow Saunders of each a Dram, Crabbs Eyes a Dram and a half, Salt of Wormwood an Ounce, Ants Eggs an Ounce, Liquor of male Mullein half a Dram, with a ſufficient quantity of Syrup of Citron Pills make an Electuary, the Doſe is two Drams, twice a Day, Drinking after it of the former Diſtill'd water, or of the following Julape three Ounces.

Take

Take water of the Leaves of Aron, of the Juice of Elderberryes, water of Juniper and of Elder Flowers of each six Ounces Magisteriall waters of Snails and of Earth-worms of each two Ounces, Syrup of the Juice of Elderberryes two Ounces, mix them, make a Julape.

The third Indication being vital Prescribes Remedies chiefly against Faintings of the Spirits, and difficulty of Breathing, and against Watching and Thirst: I shall briefly set down certain Forms of both kinds.

1. *Cordials.*

Take water of Navews, of Marigold and Cammomill Flowers of each three Ounces: Dr. Stevens's *water two Ounces, Tincture of Saffron two Drams, Sugar an Ounce. Pearl a Dram; make a Julape, the Dose is four or five Spoonfuls thrice or oftener in a Day in Faintings.*

Take Conserve of Marigold Flowers two Ounces, Confection of Alkermes and of Hyacinth of each two Drams, Pearl Powdred an Ounce, of the Juice of Citrons what suffices; make a Confection, take the quantity of a Nutmeg Evening and Morning drinking after it a Draught of the Julape.

2. *Hypnoticks.*

Take Aqua Hysterica six Drams, Syrup de Meconio half an Ounce; mix them, take it late at Night, Or,

Take small Cinnamon water an Ounce, Diacodium three Ounces, Tincture of Saffron two Drams, mix them, take to the quantity of a Spoonfull late at Night if Sleep be wanting. Or,

Take Syrup of Cowslip Flowers three Spoonfulls, Compound Peony water one Spoonfull, Laudanum Tartarized a Dram, take a Spoonfull late at Night if you cannot Sleep.

Quenchers of Thirst must be frequently given in this most Thirsty Disease, but it must be in a very small quantity, that we may allay that most troublesom Symptom without much Drink, which is always pernicious: For which end,

Take Conserve of Wood-Sorrel passed through a Sieve three Ounces, Pulp of Tamarinds two Ounces, Sal Prunella a Dram, Syrup of the Juice of Wood-Sorrel what suffices, make a soft Loboch of which let him lick often.

CHAP.

CHAP. V.

Inſtructions and Preſcripts for Curing the Anaſarca.

AN *Anaſarca* is deſcrib'd after this manner, that it is a white and ſoft Tumour of the whole outward part of the Body, or of ſome parts of it, yielding to the Touch, and leaving a Pit upon Compreſſion, proceeding from an Aqueous Humour extravaſated and heapt together, both within the Interſtices of the Muſcles, and within the Pores of the Fleſh and Skin, and even of the Glands and Membranes.

That watery Humour proceeds wholly or for the greateſt part from the Blood, for being continually produc't within the Maſs of Blood through the defect and fault of Sanguification, it is pour'd forth of the Mouths of the Arteries in a greater quantity than that it can be receiv'd and carried back by the Veins and Limphæducts and be ſent forth by the Reins and Pores of the Skin, and other Emiſſaries of the Serous Latex.

An *Anaſarca* whilſt it is ſimple, is the leaſt dangerous amongſt all the ſpecies of Dropſies: And a particular *Anaſarca* occupying only the Inferior Members, ſo the Belly do not ſwell withal, is much ſafer than an Univerſal one.

In order to a right proceeding towards a Cure, two chief ſcopes of Curing here preſent themſelves, *viz.* Firſt we muſt take Care that the water betwixt the Skin and the Fleſh be ſome way Evacuated and Conſum'd; and Secondly that a new ſupply be not continually engendred and heapt together: For which end we muſt uſe what means we may both that the Viſcera of Concoction being cleans'd from Excrements, and free from Obſtructions, prepare always a good Chyle, and ſupply the Maſs of Blood with it in a due quantity, and likewiſe that the Blood, (its Principles being reſtor'd to their fermenting Power) may duly ferment and convert into its own Nature the Juice of the Chyle continually ſent into it. The Vital Indication ſeems not neceſſary in this Diſeaſe as in many others, becauſe Faintings of the Spirits, or Watchings, for which Cardiacks, and Hypnoticks are required, ſeldom happen here: And there is little need of reſtoring Diets becauſe Faſting and Abſtinence do more good, and moſt commonly are the greateſt part of the Cure; the reaſon is that the Veſſels being drain'd by Faſting, drink up the waters Stagnating betwixt

betwixt the Skin and the Fleſh, or elſewhere, and ſend them forth partly by the Reins, the Pores of the Skin, and other Emiſſaries, and partly employ them moſt Advantageouſly for nouriſhing the Body, they being yet full of a Nutritive Juice. Firſt, to perform the firſt Indication which is for the Evacuation of the Morbifick matter, all Hydragogue Medicines both Simple and Compound, and likewiſe the Forms of Medicines ſet down before in the Chapter of the *Aſcites* ought to be apply'd to uſe: Moreover not only Catharticks and Diureticks, but likewiſe Diaphoreticks have often place in the Cure of the *Anaſarca*, though for the moſt part they are forbidden in other kinds of the Dropſie.

In a ſimple *Anaſarca* you may Purge Strongly, and it often does much good.

I have given you before Forms of Hydragogue Catharticks of both kinds. *viz.* of ſuch as exert their force both upwards and downwards, and both of a gentle and ſtrong Operation; from whence you may take them, and apply them to the preſent Method of Curing.

If you ask how Catharticks work in this Diſeaſe, and wherefore they carry forth waters better and more efficaciouſly than in other kinds of the Dropſie: I ſay that in an *Anaſarca* the Morbifick matter (which is a Lympha) reſieds partly in the Maſs of Blood, and partly in the habit of the Body within the Pores and empty Spaces lying betwixt the Veſſells: Wherefore a ſtrong Cathartick being given, it preſently Exagitates the Maſs of Blood, fuſes it, and moves it to an Excretion of any ſuperfluous or heterogeneous thing: And at the ſame time irritates the Mouths of the Arteries which lye open towards the Cavityes of the Inteſtines, that the water caſt out of the Blood may find a way forth rather by theſe Emiſſaries. Hence in the firſt place the waters floating within the Maſs of Blood are clear'd forth in a plentifull manner, and then the Veſſells being drain'd ſoon drink up the waters betwixt the Fleſh and the Skin, and preſently ſend them forth partly by ſeige, and partly by Urine or Sweat: There is no fear in the mean time, leſt, as in an Aſcites, the Morbifick matter being Exagitated, and put in Fuſion by the Medicine, be driven from the Blood into the places affected, whence it cannot eaſily get out again; or leſt, as in a Tympany, the Viſcera by reaſon of the Fibres of the Ventricle and Inteſtines being too much irritated, are mov'd into Convulſive Extenſions; for whilſt the Viſcera are ſound, and in a good ſtate, the Particles of the Medicament do them no hurt, but being carryed thence into the Blood, do not only fetch waters from it, but by Exagitating its Maſs, raiſe up its Active Particles before

fore oppreſt, and diſpoſe them for recovering their power of Fermentation.

Secondly, I have alſo ſet down before the Hydragogues operating by Urine, both ſimple and compound, and have given you Forms of Medicines prepar'd of both, and the ways of giveing them: Wherefore I ſhall not repeat them here: But becauſe all Medicines of this kind do not good alike in all affects we muſt here obſerve that Lixivials (as I have often found by experience) far exceed the reſt of Diureticks in Curing the Anaſarca. And now it's a much us'd and common Remedy for any one who has his Members ſwell'd, to Purge firſt, and then to take twice or thrice a Day ſix or eight Ounces of a Lixivium made of White-wine with the Aſhes of Wormwood or of Broom, and to continue its uſe for ſome Days: This Medicine as I have obſerv'd in many, powerfully provok's Urine, nay ſometimes in ſuch Abundance that the Patients within the ſpace of twenty four hours making above a Gallon and a half of water, have preſently recover'd almoſt to a miracle.

The reaſon why Medicines containing a fixt and lixivial Sal expell Urine more in an Anaſarca than ſuch as are endow'd with an Acid, or Alchaliſate or Volatile Salt, is, that in this Diſeaſe the watery Humours which upon failing of the Fermentation of the Blood, and of its ſanguifying Vertue, are gathered together as well within its Maſs as in the habit of the Body, upon ſtagnating there ſome time are turn'd ſomewhat ſharp: Wherefore the Lixivial Particles of the Medicine entering the Blood preſently grow in a heat with the Acids of the waters, which as they exagitate and ferment, they cauſe a mighty Fermentation in the whole Maſs of the Blood and a following excretion.

Take of the Aſhes of Broom, or of Wormwood, or of the Prunings of Vines calcin'd to a whiteneſs and ſifted, four Ounces, put them in a Glaſs-bottle with two Pounds of White-wine; let there be a cloſe and warm Digeſtion for three or four hours, then ſtrain it, the Doſe is from ſix Ounces to eight twice a Day.

Take white Tartar calcin'd with Nitre, and after melted in a crucible till it look blew, three Ounces, ſmall Spirit of Wine a pound and half, water of Snails and Earth-worms, of each four Ounces, let them digeſt cloſe luted in a ſand-furnace for two Days, the Doſe of the clear Liquor is two or three Ounces, with four Ounces of the Decoction of the Roots of Butchers Broom and Burdocks made in Ale.

For Ordinary Drink.

TAke white Aſhes of Broom cleans'd two Pounds, put them in a Bag, with Raſpings of Saſſafras three Ounces, Roots of the leſſer Galingal an Ounce, Juniper berryes and wild Carrot Seeds of each an Ounce and a half, make a Bag for four Gallons of Aſe, after ſeven or eight Days begin to draw it.

Diaphoreticks often do excellently well in a *Leucophlegmatia* (which begins or concludes an *Anaſarca*) and they uſually agree better in this Diſeaſe when confirm'd than in other kinds of the Dropſie: And though at the beginning they are not able to move Sweat becauſe the habit of the Body is inveſted with a deal of waters, however by exagitating the Blood they are a means that the active Particles implanted in it, which were dull'd before, and almoſt overwhelm'd, are rais'd up again, and diſpos'd to a Fermentation, and that all the dreggy Excrements, eſpecially ſuch as are Aqueous, are put in Motion, ſo that preſently breaking forth of their Receptacles in a plentiful manner, they readily paſs off by Seige, or Urin, and often in ſome meaſure by tranſpiration: But after that the waters being well clear'd by Purging, the Morbifick matter is ſo far diminiſht that the bulk of the Body and the ſwelling of the Members begin to abate, the remainder of the Humour is excellently conſum'd by moderate Sweats, and by a conſtant perſpiration.

We have given you before a Liſt and Forms of Hydroticks; but as to our preſent purpoſe for the Cure of an *Anaſarca*, thoſe things are moſt proper which are given in ſomwhat a large Doſe; for as to ſuch as are preſcrib'd in a ſmall quantity, their active Particles being immerg'd in the waters are overwhelm'd before they can be diffus'd in the Blood ſo as to exert their force; wherefore Spirits whether Armoniack, or Vinous, alſo Tinctures and Elixirs, nay and Powders, ſeldom come in uſe againſt this Diſeaſe; becauſe in a ſmall Doſe they do little, and if it be made very large, they often offend the bowels by their exceſs in operation, therefore let thoſe things rather be made choice of which being taken in a full Draught and warm may be able to paſs the whole Blood uncorrupted, as chiefly the Decoctions of Woods and Roots, whoſe Particles agreeing well enough with the Blood, but being not to be maſtered by it, paſs through its whole Maſs, and exert an Elaſtick force, putting all the Humours in a Commotion.

Take Raſpings of Guaiacum ſix Ounces, Saſſafras two Ounces, all the

the Saunders of each ſix Drams, ſhavings of Ivory and Harts-horn of each three Drams, let them infuſe according to Art, and boyl in eight Pounds of fountain water till half be conſum'd, adding Roots of Calamus Aromaticus, the leſſer Galingal, Burdocks and Butterburr of each an Ounce, Leaves of Woodſage and Germander dryed of each two handfulls, let the ſtraining be kept for uſe, the Doſe is from eight Ounces to ten twice a Day warm; to each Doſe may be added Spirit of Sal Armoniack ſuccinated, or of Soot from twenty to twenty five Drops: Or Tincture of Salt of Tartar from half a Dram to a Dram.

So much of Hydragogue Medicines to be taken inwardly, which cauſe waters to be evacuated either by drawing them inwardly towards the Inteſtines, or by driving them out to the Reins, or to the Pores of the Skin: Moreover there are certain outward Adminiſtrations us'd, by which waters gather'd together within the habit of the Body are put in motion, and ſo diſpos'd either generally to paſs off by Sweat, or Urine, or particularly, are preſently let forth, a Vent being made in ſome peculiar places.

In the firſt rank we place *Frictions, Liniments, Fomentations, Baths both dry and moiſt*: And particular things to evacuate waters are Veſicatories, Eſcharoticks, and prickings by a Needle, I ſhall ſpeak of each of theſe, or at leaſt of the chief of them as far as they regard this Diſeaſe.

Frictions prove often of good effect in a *Leucophlegmatia* and *an Anaſarca*: For as the habit of the Body is not only ſo charg'd with a Glut of filthy waters there heapt together, that nothing can breath through them, but even the outward parts grow cold upon the Blood's being hindred of an acceſs to them, frequent and ſtrong Frictions give a motion to the ſtagnating waters, and in ſome meaſure diſſipate them from thence, and by opening the paſſages call again the Blood into thoſe parts whence it was baniſht, wherefore it is good not only to rubb the ſwollen Member, but even the whole Body once or twice a Day with a courſe Cloath, or with a little bruſh now commonly made for that purpoſe.

In rubbing, or after it, *Liniments* and *Fomentations* are ſomtimes proper: They are prepar'd either of Salts and other Minerals diſſolv'd, or of hot and diſcuſſing Vegetables boil'd with Lees of Wine in water; and being apply'd hot open the Pores, give a farther motion to the accumulated Waters and diſcuſs them, and enlarge the compaſs of the Blood's circuit, the watery Maſs being in ſome meaſure diſſipated. The Liniments conſiſt of *Sulphur* and *Salts* of divers kinds, or of *Quick-lime* and other Minerals, which being powdred and mixt with the

Mucilaginous extracts of Smart Herbs, are made into an Ointment: To which for their better conſiſtency let a fit quantity of *Oyl of Scorpions* be added: Nay this Oyl apply'd by it ſelf (ſo it be right) gives often great relief. I knew a Boy ſwollen very much with an Univerſal *Anaſarca*, who was Cur'd by this only Remedy: For his Mother (I know not how adviſ'd) anointed his whole Body Mornings and Evenings with *Oyl of Scorpions*, chafing well the parts with her warm hand: Upon which within three Days he began to make a vaſt quantity of water, and having continued to make water ſo for ſome Days, the ſwelling vaniſhing by degrees, he grew well.

Baths are ſcarce proper for any Dropſie but an *Anaſarca*, nor for this but in the firſt Diſpoſition to it, or as it goes off: For ſince by the heat of Baths encompaſſing the whole Body, the Blood being made very hot and inſtigated, puts the waters every where in motion which were ſtagnating before, and drinking them into it ſelf conveys them ſundry ways, there is danger leſt (as it frequently happens) receiving them from the habit of the Body into its Maſs, it preſently depoſes them in the *Præcordia*, or the Brain; for there is nothing more uſual than that the affects of thoſe parts, *viz.* an Aſthma, or Apoplexy happen to Hydropical perſons after bathing: But when the conjunct cauſe of the Diſeaſe (*viz.* the ſwelling) is moderate, or not very great, a Bath of water impregnated with Salts and Sulphur, or alſo a hot-houſe promoting a gentle Sweat, are often us'd with good effect. Inſtead of a hot-houſe it's better that the Patients be plac't in ſome convenient Cells in a Salt-houſe near the Furnaces, in which the Mineral water is boil'd into Salt, which often proves of mighty benefit to them.

Veſicatories let forth the waters betwixt the Fleſh and the Skin in a plentiful manner, and ſomtimes too profuſely, theſe are to be apply'd to Hydropical perſons with very great caution, for ſuch an Epiſpaſtick apply'd to ſwollen places makes a vent too wide; upon the opening of which the water firſt breaking forth, often draws after it from the whole Neighbourhood a great Glut of it, whence preſently follows a great Conſternation of the Spirits: Moreover ſomtimes the place ſo drain'd on a ſudden, being depriv'd of Heat and Spirits, in a ſhort time becomes mortifyed: Wherefore this Medicine is ſeldom apply'd to the Leggs or Feet of Hydropical perſons where the heat is weak, and the ſwelling very great, but ſomtimes to the Thighs and Arms with ſecurity, when need requires.

Eſcharoticks are apply'd ſomwhat more ſafely to the ſwollen places than *Veſicatories*, becauſe the Flux of waters out of this

Vent

Vent is not ſo violent and in ſuch Abundance preſently at firſt: But beginning moderately it grows after by little and little to a great Current, which nature (after being accuſtom'd to it by degrees) bears better: Moreover there is leſs danger of a Gangrene after an *Eſcharotick* than after a *Veſicatory*, becauſe in that Application, the part whoſe Union is diſſolv'd is fortify'd by the *Eſchar* againſt the loſs of heat. I knew an illiterate *Empyrick* who often by an *Echarotick* ſucceſsfully evacuated the Members of Hydropical perſons, though never ſo much ſwollen, after the following manner. *viz.* Firſt he fomented their Leggs Morning and Evening with a Decoction of *Dwarfe-elder*, *Wormwood Camomill*, and other hot Herbs, the Lees of Wine or Ale being added to them, and betwixt the times of fomenting he apply'd a Cataplaſm made of the *Fæces* of that Decoction with Bran: After theſe things had been us'd three Days he covered both Leggs and Feet with a Plaiſter of Burgundy-Pitch, leaving only a ſmall hole on each Calf to the bigneſs of a ſmall Nut, in which places he put an *Eſcharotick* of the Aſhes of Aſhen Bark to the naked Skin: which being remov'd after twelve hours a ſmall Eſchar was left, out of whoſe Pores the Matter firſt Sweated gently, then daily diſtill'd forth ſomwhat more freely, and at length (the Eſchar falling off) it flow'd forth in a plentifull Stream as from an open Source, till it was drawn from the whole Legg both above and beneath.

There remains yet another way of drawing forth waters from betwixt the Fleſh and the Skin, not inferior to the former, though leſs in uſe, *viz.* by the pricking of a Needle: Which alſo muſt be done very cautiouſly and by little and little, leſt a head-ſtrong and exceſſive Flux of waters be rais'd by it. Take an ordinary Needle, ſuch as Taylors uſe, and prick the Skin over with it in the place moſt ſwell'd, but let it not enter ſo far as to draw Blood, and ſo make ſix or ſeven little holes at a time about an inch diſtant the one from the other: The water will Iſſue by drops forth of each little hole and ſo will continually Diſtill forth till all the ſwelling be gone from the place prickt: Then the next time, after ſomtimes twelve, ſomtimes eighteen, ſomtimes twenty four hours prick again in ſome other part either of the ſame Leg, or of the other, and ſo continue to make ſuch Vents for the waters once or twice a Day in this Member, or that, one alone, or two, or at the ſame time in many: For after this manner the Hydropical Corruption may be drayn'd more freely and ſafely than by any other exteriour operation whatſoever; and if in the mean time its freſh ſupply be provided againſt by inward Phyſick,

Phyſick, the Diſeaſe will be the more eaſily Cur'd: Moreover in a deſperate Dropſie that Adminiſtration ſerves very well to prolong Life, becauſe the waters being continually emptied forth by thoſe outward Vents, the inward and vital Inundation is the longer delay'd: A Man of late ſeventy years of Age, plung'd in a Dropſie over his whole Body has continued in Life and kept his head above the waters for theſe many Months beyond the expectation of all Men by the means of this only Remedy.

So far of the kinds and forms of Remedies prompted to us by the firſt, that is, the Curative Indication: As for the Preſervative Indication which takes care to reſtore the Craſis, and fermenting or Sanguifying Vertue of the Blood, it ſuggeſts to us thoſe Medicines with being endowed with hot and elaſtick Particles, raiſe up the active or depreſt Principles of the Maſs of Blood, or repair them being waſted; for which ends the vulgarly call'd Altering Remedies are wont to be preſcrib'd in the Form of an Electuary, Powder, Pills, Diſtill'd waters, Julapes, Apozemes, and Dyets, to which alſo Spirits, Tinctures, Elixirs are ſomtimes added for the greater Efficacy: I ſhall give you an example or two of each of theſe.

1. *Take Conſerves of Sea-Wormood, Scurvy-graſs, and the yellow Coats of Oranges of each two Ounces, Winters-Bark two Drams, Species Diacurcumæ a Dram and a half, Steel prepared with Sulphur three Drams, Salt of Wormwood two Drams, Syrup of Citron Pills what ſuffices, make an Electuary: The Doſe is two Drams in the Morning and at five in the Afternoon, drinking after it a Draught of Julape, or of the Diſtill'd water to three or four Ounces.*

Chalybeats very often do great good in this Diſeaſe, as in the Green-ſickneſs: Inſomuch that the whole, or at the leaſt the chief ſcope of Curing Falls frequently on this Remedy: But we muſt note that theſe kinds of Medicines do not all equally agree in theſe caſes: For thoſe that are chiefly in uſe, *viz.* Salt of Steel, or Vitriol of Mars, and others prepar'd with Acids, and wholly depriv'd of Sulphur, do no good at all, becauſe they do not promote the Fermentation of the Blood, but on the contrary rather fix it when too Exorbitant, or Elaſtick: But for an *Anaſarca*, and any other œdematous Cachexia in the habit of the Body, let thoſe Chalybeats be given, in which the Sulphury Particles are left, and are Prædominant, as eſpecially in the Filings of Iron, and in its Scales reduc't into a fine Powder, and in Steel melted with Sulphur and Powdred; theſe Powders being taken are preſently diſſolv'd by the Acid Salts within our Body, upon which the Sulphureous Metallick Particles being

being ſet free and convey'd into the Blood, ferment its whole Maſs, raiſe up the Symbolous Particles there, before lying dormant, and being joyn'd with them give a vigour to the Blood, and renew its fermenting or ſanguifying power before depreſt: Wherefore we find after a little uſe of theſe Chalybeats the pallid colour in the Green-ſickneſs goes off, and turns to a Florid Aſpect.

2. *Take compound Powder of Aron Roots, and Winters-bark of each three Drams, Roots of the leſſer Galingal, Cubebs of each a Dram and a half, Steel prepar'd with Sulphur half an Ounce, Sugar of Roſemary Flowers ſix Drams, make a Powder, divide it into twenty parts, the Doſe is one part every Morning, and at five in the Afternoon with a Draught of the Sudorifick Decoction preſcrib'd before.*

3. *Take of the Gummous extract remaining after the Diſtillation of the Elixir Vitæ of* Quercetan *half an Ounce, Powder of Earth-worms prepar'd two Drams, Roots of the leſſer Galingal, Winters-bark of each a Dram and a half, Salt of Wormwood two Drams, Iron Ruſt two Drams and a half, Balſam of Peru a Dram, Tincture of Salt of Tartar two Drams, Balſamum Capivii what ſuffices, make a Maſs, form it into little Pills, the Doſe is half a Dram at Night and early in the Morning, Drinking after it of the Julape or diſtill'd water following three Ounces.*

4. *Take Elder Flower water, and the Fermented Juice of its Berryes of each a Pound, Magiſteriall water of Earth-worms, Raddiſh water compound, Aqua Mirabilis of each two Ounces, Syrup of the Juice of Elderberryes two Ounces, mix them make a Julape.*

5. *Take Leaves of Garden Scurvygraſs, Rochet, Pepperwort of each ſix handfulls, Roots of Calamus Aromaticus, the leſſer Galingal, Zedoary, Florentine Orris, Elder, Aron, of each ſix Ounces, Winters-barke,* Jamaica *Pepper of each three Ounces, Juniper Berryes four Ounces, Cloves, Ginger, Nutmeggs of each an Ounce. Being ſlic'd and bruis'd pour to them of old Rheniſh-wine eight Pounds; diſtill it in common Organs, let the whole Liquor be mixt.*

6. 7. An Antihydropick Decoction is Preſcrib'd before amongſt Diaphoreticks: A Dyet-drink to be taken inſtead of Beer may be made according to the Form following.

Take Raſpings of Guaiacum and Saſſafras of each four Ounces, Roots of Florentine Orris, Calamus Aromaticus, the leſſer Galingal, Elecampane, of each an Ounce and a half, Juniper and Lawrell berryes of each two Ounces, Seeds of Aniſe, Caraway, ſweet Fennell, Coriander, Dill, of each an Ounce, long Pepper, Cubebs of each an Ounce and a half, Cloves, Nutmeggs, Ginger of each half an Ounce, Jamaica *Pepper two Ounces, dry'd Leaves of Salvia Acuta, Wood-ſage*

Ca-

Calamint, Agrimony of each a handful, Licorice four Ounces, being ſlic'd and bruis'd. Let them boyl in four Gallons of fountain water to half; when the ſtraining is cold, let it be put up in Glaſs-bottles for uſe: I have known many perſons almoſt given over in an Anaſarca who by the conſtant uſe of this Drink have perfectly recover'd. Of many examples of perſons Cur'd of Dropſies I ſhall now give you one.

A certain Robuſt Man, of a middle Age, after having gotten an Epidemical Quartan Ague, and being ill manag'd at firſt, had lain under it above a year, and in the mean time had us'd an ill Dyet, fell into an Anaſarca, which afterward upon his indulging himſelf to Drink very freely for quenching his Thirſt, (which was exceeding great) grew in a ſhort time to a vaſt height; ſo that all his Members from the Head to the Foot, and his Belly likewiſe being ſwollen, he was not able to turn himſelf from one ſide to the other in his Bed without the aſſiſtance of Servants.

As I firſt viſited him, and deſpairing of Cure, I plainly told him that unleſs he would abſtain from Drink, he muſt die in a ſhort time; upon which he promis'd, ſo I could ſave his Life, that he would Drink no more in a Weeks time, and was as good as his word, for though very Thirſty he ſcarce took any Liquid thing into him but Phyſick for ſix or ſeven Days: And during that time by carefully taking Hydragogue Catharticks and Diureticks, and all other things Preſcrib'd, he grew much better; and afterwards a Method as above Preſcrib'd being ſomtime followed, he was reſtor'd to his perfect Health, and now lives a ſound Man after five years paſt.

There remains certain other affects of the *Viſcera* of the Belly, of the Remedies of which according to a due Method I ſhould have treated here; but I have already perform'd this Task for the greateſt part elſewhere; for we have deliver'd moſt of the Medicines that concern the Reins amongſt Diureticks, and thoſe that concern the Stomach and Inteſtines among the number of Emeticks and Purgers: As for what reſpect the Spleen and the Womb we have fully ſet them forth in our Hypochondriack and Hiſterick Pathology: As for what regards the Genital parts and their Diſeaſes, and Cure, we have thought fit to reſerve it for another time and place: It concerns us next after having treated hitherto of inward Pharmacy; to diſcourſe ſomwhat of outward Medicines, which we ſhall do in the next Section beginning with the great Remedy Phlebotomy.

SECT.

SECT. 3.

Of Outward Medicines.

CHAP. I.

Of Phlebotomy.

TO Diſcourſe Methodically of this great Remedy, we muſt firſt conſider how many ways and for what cauſes and ends an Emiſſion of Blood happens either of its own accord, or is indicated by Phyſick. Then Secondly we ſhall acquaint you with the good and ill effects, or with the Advantages and Prejudices of this Evacuation, and ſhall give you likewiſe certain rules and cautions to be obſerv'd in the due Adminiſtration of Phlebotomy.

As to the firſt, Spontaneous Eruptions of Blood being manifold and of divers kinds, are uſually reduc't to theſe two heads, or orders, *viz.* either they are Critical, nature endeavouring ſomthing good and for the Advantage of Health; or Symptomatical, which happen for the moſt part when ſhe is put by of her Government, and all things are in Confuſion: The Eruptions of Blood of the firſt kind are again diſtinguiſht, that either they come without a Fever, and are either Periodical, which often happen at ſet times as the *Menſes* of Women, and in ſome the Flux of the Hæmorrhoides, and in others yearly Bleedings at the Noſe, or otherwiſe cuſtomary; which commonly happen upon the great changes of the year, or of the Air: Or they are erring and uncertain, as when the Blood breaks forth for our good from thoſe places, and from many others, ſomtimes in this part of the Body, ſomtimes in that. Moreover Excretions of Blood ſomtimes happen in a Fever, and often determine it: In all theſe caſes the Blood breaks forth, becauſe growing Turgid within its Veſſels, and being very much rarified, it requires a larger ſpace.

Now the Blood grows thus Turgid on two accounts *viz.* both as its Liquor is Inflammable, and as it is Fermentative.

1. As to the Firſt, that the Blood may have a due Accenſion

for the preſervation of Life, and the due performance of its Functions, its Innate Sulphureous Particles muſt be proportion'd to the Nitrous Particles coming to it from the Air: Therefore as often as the Blood growing very hot, and being highly rarified, is much open'd and looſen'd in its Texture, ſo that the Sulphur being at freedom is kindled more than ordinary, a quick and toylſome Breathing follows to draw the Nitre alſo in a fuller meaſure than uſually: Now if the abounding Sulphur cannot ſpend it ſelf after this manner by burning briskly, nor the vital flame be thus regulated, preſently the next courſe for leſsning the fuel of the Sulphur is that ſome part of the rarified Blood breaks violently forth: Hence not only in Fevers, but after Drinking Wine, Bathing, being in the Sun, and other Accidents upon which the Blood grows very Turgid, either Eruptions of Blood happen of their own accord, or it's often neceſſary to ſupply the defect of ſuch Spontaneous Evacuation by opening a Vein.

Secondly, the Blood alſo as it is a Fermentative Liquor is apt to break forth of its Veſſels, for if at any time ſome Heterogeneous thing, which will not mix with it, comes into its Latex, it ſtrongly Ferments as Wine in a Hogs-head, and boyls in its Veſſels to expell that diſagreeing ſubſtance, which ſeeing it can neither conquer, nor ſend forth by Sweat, Urine, or other ways, the Blood it ſelf throws off ſome portion of its own ſubſtance, as a Vehicle to carry forth that matter with it: hence divers Eruptions of Blood variouſly happen both in Fevers and without them; which are all rais'd by nature for ſome good intent, though it often happens otherwiſe through various Accidents and Circumſtances; but for the moſt part there is a failing in Spontaneous Hæmorrhagies critically intended; either Firſt, becauſe the Blood in boyling knows no meaſure in flowing forth; or Secondly becauſe the mouths of the Veſſels being once open'd do not preſently cloſe, or cannot preſently be ſhut; or Thirdly becauſe nature endeavouring an Excretion of Blood, does it by places which are moſt open, though often improper, as when it happens by the Lungs, Reins, Inteſtines, and other Viſcera, which therefore from being critical becomes Symptomatical, and often Malignant.

Nor only theſe ways, but likewiſe for many other Failures or Impediments of nature, Symptomaticall Hæmorrhagies happen, in all which either the Blood it ſelf, or the Veſſels containing, or both of them together, are always chiefly in the fault.

Firſt, the Blood beſides the ways above mention'd is apt to extravaſate when its Latex being ſome way corrupted, is not able to retain its due mixture, but being apt to coagulate or putrifie,

putrifie, runs into parts, whereof ſome break forth into Wheals or Puſhes, or ſhew themſelves in Spots, others plainly make Bloody Eruptions where they can firſt find a Vent; as it's generally ſeen in the Plague, Small-pox, Meazles, and in Malignant Fevers, and in ſome meaſure in Scorbutick Affects. Secondly, The Veſſels conveying the Blood are many ways the cauſe of its Symptomatical Eruption, as firſt if ſome of them are in any place obſtructed, as often as the Blood is put in a Rapid Motion, it's forc't to burſt forth either there, or near the place, and ſomtimes alſo in parts far diſtant from it; hence upon a ſuppreſſion of the Menſes, or Hæmorrhoides, a Bleeding at the Noſe often follows. Secondly, the little Mouths of the Veſſels have ſomtimes an ill Conformation, for that the fleſhy Fibres with which they are guarded are grown Lax, or reſolv'd, ſo that when the ends of the Arteries gape too much, the Mouths of the Veins cloſe; by reaſon of this affect Scorbuticall and Cachectical perſons are very ſubject to Eruptions of Blood. Thirdly, It oftens happens that the Veſſells having this ill Conformation are likewiſe affected with Convulſions, ſo that the Muſcular Fibres of the Veſſels being diſorderly contracted, cauſe ſudden and violent Sallyes of the Blood, ſomtimes upwards and ſomtimes downwards, and conſequently Eruptions: For I have obſerv'd in ſome, when the Current of the Blood has been ſlender enough, with a low and weak Pulſe, that the Convulſions of the Veſſells beginning in ſome place, and carried forward as a Wind running here and there in the Body, have driven the Blood vehemently, though never ſo low of it ſelf, and forc't it into violent Eruptions: And in theſe caſes when opening a Vein, and Medicines cooling and qualifying the Blood have done no good, we have found the greateſt relief from Narcotick's, Anticonvulſives, and Ligatures.

To ſpeak now of Bleeding by Art, we generally obſerve that Phyſick in ſome caſes imitates nature, in others exceeds it, and often regulates it, and reduces it when it acts amiſs; though there are ſome caſes in which nature far exceeds the efficacy of Art in Excretions of Blood. I ſhall ſpeak briefly of each of theſe.

Firſt therefore in whatever affects Spontaneous Eruptions of Blood uſe to do good, if at any time theſe fail, Phyſick the Handmaid of nature aptly ſuplys its place by Phlebotomy, therefore if haply the Blood by reaſon of its Sulphur, being too much at liberty and exalted, is kindled too much, upon opening a Vein the ſuperfluity of that Inflammable fuel will iſſue forth: So likewiſe immoderate Turgeſcencies of the Blood by Reaſon of ſome unſubduable ſubſtance gotten into it, are allay'd by

this means: Wherefore Bleeding is preſently ordered both againſt continual Fevers which proceed from the former cauſe, and againſt ſuch as intermit whoſe fits are from the latter: And ſo, as often as an accuſtomed Evacuation at ſet times which is ſtopt, or a humour ſtruck back from the outward parts, or a ſudden ſtoppage of the Pores, or if a Surfeit, Drinking of Wine, and other Accidents of this nature, by crowding the Blood with Heterogeneous Particles, cauſe a Turgeſcency in it, Phlebotomy is uſually a moſt preſent Remedy.

Secondly, Phyſick does not only imitate nature in letting forth of Blood, but often exceeds it; nay and frequently aids it, and reduces it when it labours, and acts amiſs. For if at any time the Blood taking a Head, ruſhes in a Body to one part, and there either preſently breaks forth in a diſorderly manner, or being gather'd together in a large quantity cauſes an Inflammation, a Vein being open'd in ſome remote part ſtops that Præternatural Salley of the Blood, and often puts an end to the Eruption, or Inflammation: Wherefore in the Pluriſie, Sqinancy, Peripneumonia, in Spitting, or Vomiting Blood, when nature either yields it ſelf overcome, or being ſtruck as it were with a Rage ſeems to lay violent hands on it ſelf, Chirurgery withdrawing the Blood to ſome other place, and letting it forth, reſtores all things, when almoſt in a loſt Condition.

Moreover Phyſick often moderates or reduces nature when too profuſe, or extravagant in the Effuſion of Blood, for in Truth all immoderate Eruptions of Blood muſt be ſtay'd, rather than promoted: Again in regard in the Plague, Small-Pox, and Meazles broken forth, and in Malignant Fevers a Spontaneous Eruption of Blood always foreboads ill: Therefore in thoſe affects Stiptick Medicines reſtraining the Eruption of Blood are more proper than breathing a Vein.

Nevertheleſs there are ſome caſes of an Effuſion of Blood by nature, which Phyſick can no way imitate, nor ſupply by Phlebotomy if haply they fail: In Fevers about the Criſis of the Diſeaſe, *viz.* after the Digeſtion of the matter, that is, its preparation for Separation, a Spontaneous Eruption of Blood, in regard it comes in a due nick of time, is far better than any Bleeding by Art, the due ſeaſon for which is unknown: And ſo a flowing of the Menſes and Hæmorrhoides hapening by the Inſtinct of nature is much more Advantageous than if Blood be caus'd to flow thence by Art.

There is this notable difference betwixt Bleeding by opening a Vein, and a Spontaneous Eruption of Blood, that in this the Blood flows in a manner wholly out of the Arteries, and in the other Evacuation it's drawn only out of the Veins.

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So far of Phlebotomy compar'd with a Spontaneous Eruption of Blood: I ſhall now ſhew its uſe and effects both good and evil in the Practice of Phyſick: Therefore in the firſt place let us ſhew in general what ſort of alteration this Evacuation cauſes in the Maſs of Blood, and then to what Diſeaſes either of the whole Body, or of particular parts it moſt immediately has reſpect to.

Concerning the firſt it's obvious that the Blood after Breathing a Vein is altered both as to its quantity, and as to its Temper and Craſis, and as to its Motion.

The firſt and moſt common Indication for Breathing a Vein is that by this Adminiſtration the Maſs of the Blood be leſſen'd: Hence even the vulgar growing to an overful habit of Body cauſe themſelves to be let Blood to remove that Plethorick Diſpoſition, but though the evils of that affect are remov'd or prevented by nothing better, yet the neceſſity of this Evacuation ought to be avoided as much as may be: Becauſe the Blood is rendred by it more Sulphureous and leſs Salt, and conſequently it diſpoſes Men to a Feveriſh habit, and to grow Fat: Moreover the great Remedy, Bleeding, if made common on every ſlight occaſion, will become of no effect in grand Diſtempers when it is needed: To which we may add that according to the obſervation of the vulgar, the more familiarly any one uſes Bleeding, the oftner he will want it: For the Blood being let forth to avoid an overgreat fullneſs, the reſt of the Maſs ſoon riſes again to a Plenitude, though it's worſe in its Craſis, For by this means being much bereft of its Balſamick Salt which preſerves it from Putrefaction: Inſtead of it, it's more fill'd with a Fatning and Inflammable Sulphur.

2. Phlebotomy amends the Mixture and Temperament of the Blood in ſundry reſpects: Firſt if any Heterogeneous thing be gotten into its Maſs, which can neither be maſtered, nor eaſily ſeparated, and ſent forth, upon opening a Vein the Blood flowing forth carries with it often a great Portion of that matter: So again the Blood declining from its Temperament is often reſtor'd by Phlebotomy; for when its Maſs upon the exaltation of the Sulphur, or fixt Salt, or both of them together, is degenerated into a ſharp, Salt, or Salino-Sulphureous nature; a Portion of the Blood being drawn out, preſently it ferments anew, and often there is ſuch a change made of all thoſe kinds of Particles, that thence forwards the Spirits with the Volatile Salt begin to riſe again, and recover their Dominion, keeping the Sulphur, and fixt Salt under, as they ought to be: Hence Bleeding gives often great relief not only in Fevers, but likewiſe in the Scurvy, Jaundiſe, and even in a beginning Phthiſick; For the Blood

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after the Veſſels are emptyed, as the Stomack when diſcharg'd, Concocts and Aſſimilates all Humours that come into it better, and more eaſily ſeparates any Heterogeneous thing and ſends it away.

But if the mixture of the Blood begins to be much diſſolv'd, or wholly to ſink, as in the Plague, and Malignant Fevers, we muſt utterly abſtain from Bleeding; for upon taking away of Blood the proviſion of the Spirits (whoſe only buſineſs it is to preſerve the Maſs of Blood from Putrefaction and Corruption) is diminiſht: So that all things preſently tend to a pernicious Diſſolution. Moreover if the Diſcracy of the Blood be ſuch that the more noble Principles, *viz.* the Spirits, Volatile Salt, and Sulphur being depreſt or ſpent, the watery and earthy Particles, have the Prædominancy, the Blood muſt by no means be let forth, but be preſerv'd as the Treaſure of Life: Hence in a Dropſie, Cachexia, Conſumption and other affects, where the active Principles are mightily depreſt, you had as good cut a Mans Throat as open a Vein.

In the foreſaid caſes where the Craſis of the Blood is conſider'd, it's eaſy to determine whether Bleeding be proper, or not, but in certain other caſes, as eſpecially in a Putrid continual Fever, when Life and Death depend on this point, there is need of great Deliberation. Now in this difficult caſe we muſt conſider the State of the Blood, the tendency of the Morbifick Matter, and the ſtrength of nature: Firſt as to the former, if in a Putrid Fever the Blood boyling very much cauſes a mighty heat, with Thirſt, Watchings, and a parching heat of the Jaws, and no free Sweat, or Eruption of Puſhes appears, or is expected in any ſhort time, Bleeding is ſo plainly indicated, that it were a crime to omit it: But on the contrary if in a weak Body, a ſlow and remiſs, but continual Fever ariſes with a weak Pulſe, forbear taking away any Blood, and let it be cleans'd by Tranſpiration, Urine, and Bliſtering. In a middle State of the Blood, let Bleeding, being of it ſelf indifferent, be determined by other things. Therefore in the ſecond place we muſt conſider the Tendency of the Morbifick matter, or its Propenſion, which matter if it lies dull in the Maſs of Blood and unapt to ſeparate, and ſo (as it frequently falls out) a Tranſlation of it to the head inſtead of a Criſis hapning, it threatens the Brain, and the *Genus Nervoſum*, Bleeding ought to be ſeaſonably Adminiſtred for the prevention of theſe evils: But if that matter mov'd with a ſudden Impetus, and either ruſhing inwards to the Viſcera of the Belly cauſes a violent Vomiting, or Flux, or driven outwards brings forth the Small-pox, Meazles or other Puſhes; every ſuch Impetus of nature, if good ought not to be diſturb'd, if evil muſt not be rendred worſe by Phlebotomy;

botomy: For to let Blood in these cases is not only dangerous, but very often also Extreamly Ignominious. Thirdly, concerning Bleeding in a doubtful case, we must consider the strength of the Patient; for in a sound Constitution, a Vigorous Age, the beginning of a Disease, and whilst the Functions both Vital and Animal are in a vivid or indifferent State, we may with confidence order Bleeding unless somthing indicates the contrary; but when it is otherwise as to those conditions we must not inconsiderately proceed to that Evacuation.

Thirdly, the disorderly Motions of the Blood, *viz.* when being struck, as it were with a Rage, it either rushes violently, or conveys offensive matter somtimes into one part, somtimes into another, it is excellently moderated, or reduc't by Phlebotomy; wherefore for violent Head-aches, all Convulsive, or Sleepy Fits, for Catarrhs, Inflammations of the Eyes, and for the Cough, Asthma, Fits of the Gout, and of the Stone in the Kidneys, or for Phlegmons, Erisipela's and for many other affects caus'd by the Fluxions of the Blood or Serum, Bleeding is commonly prescrib'd, and that with good success, for upon draining the Vessells, the Blood getting a more free passage is Circulated calmly and undisturb'd: Moreover whatsoever of this, or of the Serum is extravasated, is drunk up again and brought into its due course.

Having thus shewn you the effects both good and evil which happen to the Blood in its different State upon Breathing a Vein, we must now enquire to what chief Diseases either of the whole Body, or of some particular part that kind of Remedy has a most immediate regard to it: And first as to general affects it's well known that Bleeding is indicated by a hot and dry Distemper, and forbidden by a cold and moist. In every Fever it's usually propos'd, never in the Dropsie: Next if we consider particular Diseases, there is no region or part of the Body but some time may require it: The Headaking, the Brain oppress't with Blood, or Serum (whence a world of evils spring) the Inflammation of the Eyes, Face, Mouth and Throat, all Diseases of the Brest, and Præcordia (to each of which the disorder of the Blood gives a Rise or affords Fuel; also obstructions, or inflam'd affects of the Liver, Spleen, and other Viscera, so likewise both the overgreat fulness and athletick habit of the whole Body, and the Tumours, and Painful, or Convulsive Passions of each particular Member seem to accuse the Blood as the Author of all the evil, and require its Emission as it were by way of satistisfaction.

If at any time in these and many other affects Bleeding be manifestly indicated, before we set upon it we must consider

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of these four things, *viz.* in what place, after what manner and by what instrument, at what time, and in what quantity the Blood ought to be let forth.

1. As to the First, though according to the Laws of the Circulation of the Blood there be little difference from what Vessel it be drawn, so it be large enough; yet because besides a general Evacuation of Blood sometimes a partial Derivation properly so call'd (as when the Blood is to be drawn from some particular place where it is gathered together) and likewise a Revulsion, when it is to be withdrawn into this or that part, are intended, therefore in the Body of Man various limited precincts, as it were, are assign'd, out of which Blood may be let according to occasion, and for most necessary uses, sometimes out of this, sometimes out of that, or the other.

If therefore at any time a general Evacuation of Blood be indicated the common or middle Vein of the Arm is best to be open'd, for this being of a good largeness easily admits the Lancet, and the Blood flows equally from the whole Body to its wide Orifice, upon the free Emission of which not only the Plethorick Disposition is taken away, but the greater Vessels being every where emptyed by this means, the Blood stagnating in any place is restor'd again to Motion, and if extravasated is drank up again into the Veins: Wherefore in great affects, where the Blood gathered together in the Brain or about the Præcordia threatens a sudden Destruction, the best way, not only of a general Evacuation, but likewise for a Revulsion is to let forth the Blood in a full current by opening a Vein in the Arm with a large Incision.

But if without any great Plethora the Blood be to be Evacuated from the whole Body, and to be withdrawn from the Superiour Region of the Body to the Inferiour, as in suppressions of the Menses, or Hæmorrhoids, it's more propper to draw Blood from the Foot, or from the Hæmorhoid Veins by Leeches: And if after an Evacuation of Blood from the whole, it must also be deriv'd from some particular place where it is gathered together, let it be taken near the place affected; Hence in Cephalick Diseases we open the Vein of the Forehead, Temples, or Throat: To Cure Tumors and Pains hapning in the Joynts, we either open a Vein beneath or near them, or draw forth the Blood by applying Cupping-glasses, or Leeches there: And so in affects of the Thorax and of the Belly either Cupping-glasses are apply'd to the Region Distempered, or Leeches to the Vessells of the Fundament.

As to what is said that some Vessels have a peculiar respect

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to ſome of the Viſcera in particular, as the outward Vein of the Arm to the Head, the inward to the Liver, &c. All this is a meer vulgar errour, grounded on no reaſon or Anatomical obſervation: Therefore aſſoon as it is agreed on for opening a Vein, and of the place, make choice of ſome large Veſſel, and very fair to the ſight that it may be more eaſily open'd, and let it not have any Artery, Nerve, and Tendon near it, that it may be Lanced more ſecurely. Wherefore the middle Vein of the Arm is moſt commonly made choice of, though the Exteriour call'd the Cephalick be more ſafe, being leſs crowded with other Veſſels.

The Jugular Vein, ſo generally open'd in Beaſts is moſt ſafely and eaſily lanc't, and is as proper as any other whatſoever for a general Evacuation of Blood from the whole Body, beſides its excellent Derivation from the Head.

If you open the Vein above or near the Ancle you muſt take a mighty care leſt you hurt the Tendon, which ſometimes happens through the unskillfulneſs or raſhneſs or Chirurgeons, to the great prejudice of the Patient: Moreover you muſt take care of opening a Vein near its Anaſtomoſis with an Artery: For if this be done the Blood ſprings forth violently all of a Scarlet colour, and its ſtream is not eaſily ſtopt, nor the Orifice of the Veſſel ſoon clos'd.

As to the ways or Inſtruments with which Blood is drawn forth, it's done either by opening a Vein with a Lancet, or by Suction with Leeches, or by Cupping-glaſſes after Scarification.

It's known by ſad experience that in Lancing a Vein ſometimes an Artery is prickt, whence either Death, or a cutting off of the Member ſometimes follows; the reaſon is that an Artery ought inceſſantly to vibrate and beat in like manner as the Heart it ſelf, its Fibres iterating the perpetual charges of Syſtole's and Diaſtole's, wherefore a hole made in its Ductus becomes as it were incurable by reaſon of the continual Motion of the Veſſel, and the Efflux of Blood: It is far otherwiſe in a Vein whoſe Aperture preſently cloſes again of its own accord; there being little ſtreſs of contraction lay'd on its Tunicles, and indeed only ſo that its Fibres being a little dilated on occaſion, the Blood flowing back, may be gently driven forwards: If at any time a Phyſician or Patient are fearful of opening a Vein, an Extraction of Blood by Leeches, or Cupping-glaſſes with Scarification will aptly enough ſupply its defect, and often with the like Advantage; nay theſe Adminiſtrations for removing the Conjunct cauſe of a Diſeaſe, where there is need rather of a partial Derivation, or Evacuation than a general one, are often preferr'd to Phlebotomy.

The due ſeaſon for letting Blood is often of ſo great moment, that whereas this Evacuation does good at one time, at another it proves mighty prejudicial: There are various reſpects of times to be conſidered concerning Bleeding, but chiefly theſe four, *viz.* the time of the Diſeaſe, Age, Year, and Day, the Firſt of theſe chiefly concerns the Cure of the Patient, and the reſt his Preſervation.

Firſt, therefore if we ought to let Blood in any Diſeaſe, the fitteſt time for it will be about the beginning of it, or in its encreaſe, but not at all, or very cautiouſly in its height, or Declination: For in the former whilſt nature endeavouring a Criſis is extreamly buſied, ſo that the Spirits labour mightily, and the Blood ferments very much, that its laſt effort ought not to be diſturb'd, and when a Diſeaſe is upon remitting, either nature being conquereſs, does not ſtand in need of that Aid, or being conquered will not bear ſuch Evacuation.

Secondly, if at any time we deliberate of Bleeding for prevention, Infants, Children, and aged Perſons are exempted from it by the general Practice of all Nations: This Evacuation alſo heretofore was forbidden to Women with Child, but now it's very ordinarily preſcrib'd: Men of a ſtrong Conſtitution, and of a middle Age bear Bleeding well enough, and want it very often, but ought not to admit it the firſt and ſecond time without great occaſion, for once begun, and then repeated, it ſoon paſſes into an Inevitable cuſtom: Hence thoſe who uſe to Bleed Spring and Fall cannot afterwards omit this Evacuation without danger: But thoſe for whom it is good or neceſſary to be let Blood once or twice a Year, the moſt ſeaſonable times for it will be about the beginning of the Spring and Autumn, when the Blood being apt to Ferment anew, is in danger of changing its Craſis. Bleeding in ſeaſon prevents the exaltation of the Sulphur and Salts, and conſequently keeps the Blood from any Feverish, Scorbutick, or otherwiſe vitious Diſtemper: And likewiſe from fuſing it ſelf and pouring its Serous and other dreggy Excrements on the Brain, Lungs, or Viſcera of the Belly. About the Solſtices when our Bodies are very cold, or hot, the Blood, as alſo the Juices of all Vegetables being in a fixt State, and unapt for any Turgid Motion, ought not to be let forth unleſs ſome urgent cauſe requires it.

3. Whereas ſome religiouſly or rather ridiculouſly obſerve in Bleeding the Poſition of the Heavens and the Aſpects of the Moon and Stars, it's altogether Frivolous.

4. As to the time of the Day, in Acute Diſeaſes when immediate Bleeding is indicated, a Phyſician being call'd, after the Body is prepar'd, may order that operation at any hour of

of the Day or Night. But if there be room for delay, then it's more proper to Bleed rather in a Morning when the Stomack is faſting and the Veſſels are emptyed by the Night Perſpiration, ſo that the current of the Blood is then in a very great Calm and free from Serous Excrements: Nay though neceſſity preſſes, let it be delay'd a little, till the freſh Juice of things taken into the Body be paſt into the Blood; for the Veſſels being emptyed will draw haſtily into them the Chymus not only crude, but often diſagreeing with, or diſproportionate to the Blood; whence not only its Motion is diſturb'd, but alſo the Vital flame is ſometimes in danger of being overwhelm'd: I have known ſome who upon Bleeding ſhortly after large Drinking, or pouring in of Vinous Liquors, have fell into dreadful ſwounding Fits, which continued a very long time, till the Vital Spirit half overwhelm'd happen'd at length to recover.

5. As to the quantity of Blood to be taken, beſides the manifeſt errour of thoſe who are ſparing, or profuſe of it in the greateſt extreams, there is likewiſe an errour of no ſmall moment committed within the moderate Limits, whilſt in ſome caſes the Blood is taken too ſparingly, and in others in a greater quantity than is fitting: In a burning Fever, the Pleuriſie, Peripneumonia, Squinancy, Frenzy, Apoplexy, and other great Diſeaſes riſing from the Turgeſcency or Inflammatory Incurſion of the Blood, a ſpare Bleeding always does more hurt than good: For beſides that it does not remove the Antecedent cauſe of the Diſeaſe, *viz.* the Plethora, it moreover encreaſes its Conjunct cauſes, *viz.* the Inflammation, or Irruption of the Blood: For it's a conſtant obſervation that after a ſpare Emiſſion of Blood, its whole Maſs preſently boyls in a high meaſure, and makes new Sallyes into the part affected: The reaſon of which is, that in a great Plethora many Portions both of the Blood and Serum being driven into ſtrait and by receptacles, are forc't to reſide there, which upon the Veſſels being a little emptied ruſh back haſtily into the Maſs of Blood, and trouble it mightily, driving it here and there in a violent manner.

As a ſpare Bleeding in ſome caſes is not only uſeleſs but hurtful, ſo in others a too large Effuſion of Blood is ſeldom without danger, and ſometimes proves mighty prejudicial to Health: For if at any time there be a failing of ſtrength, or the Body labours under a great Cachexia, we muſt be ſpare of Bleeding, and it is either forbidden, or being indicated by reaſon of ſome accident it muſt be allow'd but in a ſmall quantity: Wherefore in Men of a tender, weak, or cold Conſtitution, and in Conſumptive Perſons, and ſuch as are affected with a long or Malignant Fever, alſo in thoſe that are Hydropical, or very Cacochymical,

Cacochymical, we must not lightly open a Vein, at least being open'd we must not let forth much Blood.

The quantity of Blood to be drawn being agreed upon, the next care must be, that a large Orifices being made, it flows forth equally mixt in as short a space as may be: For otherwise if it issue, forth at a slender Orifices either by Drops, or in a small stream, the Mass of Blood fermenting will separate into parts, and what is most Subtle and Spirituous will spring forth, the thicker, and more dreggy Portion remaining behind: Hence it is to be observ'd, that if at any time the Blood being let out of a large Orifice with a full stream be stopt a little by putting the Finger on it, and in a short while after be let run again, the Blood issuing forth the Second time will be much purer and brighter than the former, because in the interval of its running, the more subtle Particles having got free of the thicker and gathered themselves together in a Body prepar'd themselves for flying forth.

CHAP. II.

Instructions and Prescripts for stopping an Eruption of Blood.

THere being various and manifold kinds of Hæmorrhagies or Eruptions of Blood, Physick is not needful to all of them: If a great Effusion of Blood happens through a Wound, &c. Chirurgery undertakes to stop it: Moreover an Eruption of Blood, if it be Critical ought not to be disturb'd by any Medicine but to be left wholly to the governance of nature (so she be free and enjoys her power) nay in Symptomatick Bleeding, so long as it is but small, or not very prejudicial Physick is not required: But then chiefly and in a manner only it is needful, if at any time the Flux of Blood be either immoderate, or breaks forth in improper places.

Bloody Eruptions of the latter kind require help chiefly if haply the Blood be cast forth upwards by coughing, or vomiting, or be voided downwards by the Fundament, or the Urinary passages, for in these cases though the quantity of Blood voided be not commonly much fear'd, yet because a danger-

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dangerous or pernicious Ulcer often follows the Solution of Unity ſo made in the Lungs, or in the Stomack, or Inteſtines, or in a Vein; therefore we muſt diligently take care of thoſe Hæmorrhagies from their very firſt appearance, and therefore ſuch Bloody Excretions are ranged amongſt the Diſeaſes of thoſe parts, and we have already delivered elſewhere the Theories and Cures of Blood-ſpitting, and the Bloody Flux, ſo that there is no need for us to repeat them here, no more than that of Piſſing Blood which belongs to the Pathology of Nephritick affects, wherefore I ſhall paſs to thoſe Paſſions, in which there being an immoderate Efflux of Blood, there is a particular neceſſity for Medicines to ſtop it.

The chiefeſt kinds of thoſe ſorts of affects are theſe three, *viz.* an Eruption of Blood from the Noſtrils, and of the Menſes, and immoderate Fluxes of the Hæmorrhoides. The Cure of this latter belongs rather to Chirurgery than Phyſick, and we have thought fitting to refer the conſideration of the other to the Pathology of the Womb: An Effuſion of Blood by the Noſtrills is the moſt general kind of thoſe ſorts of Paſſions, and what I ſhall here deliver for the Cure of this Eruprion of Blood may be apply'd to all other Hæmorrhagies whatſoever.

Therefore concerning the Cure of an exceſſive Bleeding at the Noſe there are three primary Indications, *viz.* Curatory, Vital, and Preſervatory: The two former have regard to the immediate ſtopping of the Symptom as often as it preſſes; and the later undertakes to remove the cauſe of the Diſeaſe that the returns of the Eruption of Blood may abate of their violence, or wholly ceaſe: Again this Eruption of Blood muſt be manag'd one way if without a Fever, and ſomewhat after a different manner if joyn'd with it.

If at any time therefore without a Fever much Blood flows from the Noſtrils, preſently as there will be need of Remedies to ſtop the Blood, there will be three chief intents of Curing, all of them to be put in Practice together, *viz.* the Turgeſcency of the Blood muſt be ſo allay'd that it be not prone to make diſorderly Sallyes: We muſt farther take care that its Fluxion being withdrawn from the Noſtrils, be diverted elſewhere, and that the gaping Mouths of the Veſſels within the Noſtrils be clos'd: For which ends a great many Remedies both External and Internal, and of divers kinds are wont to be adminiſtred, we ſhall ſpeak of the former in order and briefly.

Firſt, therefore let the Patient keep himſelf quiet with his Head in an upright poſture, then let the Joynts of his Arms and Thighs, many of them together, but not all of them be bound with ſtrait Ligatures, which muſt now and then be loosn'd and

and remov'd to other parts; for upon their being bound all at once, and ſo continued a long time, I have known that terrible Swoundings have happen'd, by reaſon of the Bloods being detain'd in the outward parts, and kept too much from the Heart: Though otherwiſe this Remedy being prudently adminiſtred gives often relief. For ſince by this means the Blood which paſſes into the Members by the Arteries, is hindred from its quick return by the Veins, its violent taking to the Head is ſtay'd: Moreover by the painful Ligatures of the Joynts the Muſcular Fibres of the Carotide Arteries from whoſe Branches the Blood iſſues at the Noſtrils are freed from the Convulſion which they often fall into.

2. To withdraw the courſe of the Blood from the Noſtrils, ſometimes it's proper to open a Vein in the Arm, or Foot, for the more Blood is carried by the Arteries to the place where a Vein is open'd, the leſs will flow to the Noſtrils: Yet this Adminiſtration does not always prove ſo ſucceſsful but its contrary effect ſometimes happens; as we have obſerv'd before, where we treat of Spitting Blood: The reaſon whereof is that the Veſſels being ſuddenly, and not ſufficiently emptyed, draw into them again the diſagreeing Humours before ejected, and ſtagnating within the Pores, by which the Blood is preſently ſtirr'd up again to a greater Turgeſcency for Eruption.

3. Cold things apply'd to the Forehead and Temples, alſo to the Nape of the Neck where the Vertebral Arteries aſcend, conſtringe the Veſſels, and ſomewhat repreſs or repel the Flux of Blood: But it is ill done of ſome who adviſe topical coolers to be apply'd to the Jugular Veins, for this retarding the courſe of the Blood in its return, cauſes it to flow more plentifully out at the Noſtrils: Moreover as to the uſual way of applying a Linnen-cloath or a Spunge dipt in Vinegar to the Share and Genitals, it gives relief only as a Ligature of the Members, *viz.* in as much as it hinders the return of the Blood of the Veins. A ſudden and unexpected Sprinkling of cold water on the Face by ſtriking a Terrour often ſtops an Eruption of Blood.

4. Cupping-glaſſes applyed to the Hypochondres, Flanks, inward parts of the Thighs, and to the Soles of the Feet, have been accounted both by Ancient and Modern Phyſicians a famous Remedy for withdrawing an Eruption of Blood from the Noſtrils.

5. Frictions of the extream parts are commended in this affect by ſome Practitioners, which nevertheleſs we judge not ſo very good, nay ſcarce ſafe: For though they cauſe a greater confluence of Blood to the Hands and Feet, yet they ſo accelerate

accelerate its return, that it endangers a more violent Sally of it to the Noſtrils.

6. *Zacutus Luſitanus* among Revulſory Remedies propoſes an actual Cautery to be apply'd to the Soles of both Feet, and *Crato* the bending of the little Finger of the ſame ſide, which laſt you may do well to try in regard it is done eaſily: Though I do not adviſe ſo of the other Remedy, unleſs the Cure by it were more certain, which might recompence the Pain, and Lameneſs that will enſue.

7. A Swounding by what means ſoever caus'd, ſtops preſently for the moſt part an Eruption of Blood, be it never ſo refractory: Wherefore when perſons ſeiz'd with an Eruption of Blood and grown weak by it are pull'd out of Bed, or if Blood be taken from them though in a ſmall quantity by opening a Vein, they apprehending a danger in it, or if their Members are long bound, or they are ſuddenly put in a fright with ſome feigned Rumour, and upon any other occaſion fall into a Swound, or a Fainting Fit, the Eruption of Blood from the Noſtrills preſently ceaſes: The reaſon whereof is evident enough, becauſe as ſoon as the Motion of the Heart fails both the Blood and Spirits preſently ruſh thither, ſo that all outward Effuſion is incontinently ſtopt and that which before was immoderate does not begin afreſh.

8. In the laſt place we muſt take a view of thoſe Remedies for repreſſing an Eruption of Blood from the Noſtrils which are ſaid to work after an Occult manner, and by Sympathy, and Antipathy: Of which kind chiefly are the Sympathetical Powder, made of *Roman Vitriol* Calcin'd to whiteneſs by the Sun in the Summer: Alſo a piece of the Wood of a Maiden or young Aſh, cut about the moment that the Sun enters *Taurus*: The efficacy of which Remedy is atteſted by many credible witneſſes to have been prov'd in ſtopping Eruptions of Blood in wounded Souldiers during the late Civil Wars. So a dry'd Toad ſewed up in a Silk Bag and worn on the Pit of the Stomack is ſaid to ſtop any Flux of Blood, and to prevent its return.

There are many other famous Medicines for ſtopping Blood, whoſe operation is wont to be referr'd to Occult cauſes, and to ſome ſecret Vertue: As Neck-laces of the Blood-ſtone worn about the Neck, alſo *Uſnea*, or the moſs of a Mans Skull carried in the hand: Epithems of the Leaves of Netles ſtampt and apply'd to the Soles of the Feet, and the Palms of the Hands; which Empirical Adminiſtrations being to be try'd without trouble or charge, we have no reaſon to reject them, eſpecially ſince in a dangerous caſe we ought to leave nothing unattempted,

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and in regard that thoſe applications may do good ſometimes in this reſpect, that they fortify the imagination of the Patient.

Whilſt theſe outward Adminiſtrations are us'd for repelling or withdrawing the Flux of Blood from the Noſtrils, let Topicks alſo be put into the Noſtrils to cloſe the Gaping Mouths of the Veſſels, for which uſe *Injections of Liquid things, Pledgets, Powders to be blown in, and Fumes* are wont to be preſcrib'd, which failing of effect we muſt come at laſt to Eſcharoticks.

9. Amongſt Liquids, a Solution of Vitriol made in fountain water, is accounted not only the chief, but as good as all the reſt: Some boaſt of this as of a great ſecret, and an infallible ſtopper of Blood: Indeed the ſame apply'd to a freſh Wound, for as much as by corrugating the extremities of the cut Veſſels it cloſes them, it keeps back the Flux of Blood and powerfully ſtops it: But in regard in an Eruption of Blood from the Noſtrils (where the Blood is convey'd to the gaping Mouths of the Arteries and ought to be receiv'd by the Veins, this application cloſes theſe as well, or rather than thoſe, it does here little, or no good at all, as I have often known it try'd. This Medicine is prepar'd of green Vitriol, *viz.* the Hungarian, or of that of our own Country, alſo of the Factitious Vitriol of Mars diſſolv'd in a ſufficient quantity of fountain water. I know ſome commend a Solution of Roman Vitriol, which they are wont to uſe not only by injecting it, but by applying it Sympathetically to a Bloody Linnen-cloath: I have alſo known a Water prepar'd of an Infuſion of white Vitriol with Bole and Camphire us'd ſucceſsfully to Wounds, and often to other Eruptions of Blood.

But in regard a water injected into the Noſtril does not ſtick enough to the Mouths of the Veſſels, but is waſht away by the Bloods breaking forth before it can exert its Vertue; therefore it is better either that a Stiptick Powder be blown into it, or that a Pledget dipt in the water of Vitriol be thruſt into the Noſtril to the upper part of it, either by it ſelf, or ſtrew'd with an Aſtringent Powder. Many Stiptick Powders and of divers kinds are wont to be preſcrib'd for this purpoſe: I commonly uſe either *Crocus Martis* Calcin'd to the higheſt redneſs, or the Powder of *Vitriol Camphorated*, or a *Vitriolick Soot* ſcrap't from the bottom of an old Braſs Kettle, the Powder of which I have often try'd with ſucceſs in this caſe. In obſtinate Hæmorrhagies and not yielding to other Remedies, let a Pledget having on its top a Cauſtick Colcother be thruſt up into the Noſtrils as far as it will go, that the little Mouths of the Veſſels being burnt, and covered with an Eſchar, all Eruption of Blood

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may be preſently ſtopt. There are many other Errhines famous amongſt Practitioners for ſtopping Blood, as Hogs-dung thruſt up into the Noſtrils, which is thought meerly by the Naſtineſs of its Odour to repel the Blood ready to burſt forth: Alſo the Fume of the Blood dropping on a red-hot Iron and return'd up into the Noſtrils, the Powder of which alſo when burnt is blown up into them. *Uſnea* or the growing Moſs on a Mans Scull which has not been inter'd is highly commended by ſome for this effect.

So much of outward Remedies for ſtopping Bleeding; whoſe Vertue ought likewiſe to be promoted by inward things ſeaſonably given and cooperating.

Therefore a thin Dyet being preſcrib'd, and the Patient ordered to keep himſelf in an erect poſture, or not much leaning back, whilſt the foreſaid Adminiſtrations are orderly apply'd, let Medicines appropriated to the ſame end be preſcrib'd alſo to be inwardly taken: Remedies of this kind have two chief ſcopes, *viz.* Firſt to cauſe the Blood being kept within its Veſſels to be quietly Circulated, its Effervescence, whether happning through its Accenſion or Fermentation, being ſuppreſt. Secondly, to retard by fit Remora's, the violent Motion of the Heart, driving round the Blood too rapidly.

1. The firſt intention requires thoſe kinds of Medicines which ſuppreſs the too great Accenſion of the Blood, and appeaſe its undue Fermentation; for which uſes I am wont to preſcribe the following.

Take the waters of Plantain, red Poppies, Purſlain, and of the Spawn of Froggs of each four Ounces, Syrup of Water-lillies two Ounces, Sal Prunella a Dram; mix them, make a Julape, the Doſe is three Ounces thrice or four times a Day.

Take Barley-water two Pounds, red Roſe-leaves a handful, Spirit of Vitriol as much as will give it a grateful Acidity, or about half a Dram, make a warm Infuſion for extracting the Tincture, add Syrup of the Juice of St. John's *Wort two Ounces; the Doſe is three or four Ounces to be taken at pleaſure often in the Day time, or by Night.*

Take Leaves of ſtinging Nettles, and of Plantain of each three handfuls, being bruis'd pour to them of Plantain water four Ounces, expreſs it ſtrongly, and take it.

2. For the Second intention, *viz.* to retard the over-violent beat of the Heart, Hypnoticks and Opiats are proper.

Take red Poppy-water three Ounces, Syrup of Diacodium half an Ounce: Mix them, make a Draught to be taken going to Bed. (Or)

Take Conſerve of red Roſes an Ounce and a half, Powder of the

Seeds of Henbane and of white Poppies, of each two Drams, Syrup of Poppies what ſuffices. Make an Opiate. The Doſe is the quantity of a Nutmeg every ſix or eight hours (Or)

Take Laudanum Cydoniated a Dram, the Doſe is fifteen Drops twice a Day in a proper Vehicle.

So much of an immoderate Eruption of Blood and its Cure, whilſt it happens without a Fever, but when it happens in a Fever, and muſt be ſtay'd becauſe of too much loſs of Blood, it is either Critical, growing to be immoderate by reaſon of ſome Accident, to which the Method and Medicines even now preſcrib'd may be accommodated, though with ſome caution and a due reſpect to the State of the Fever: Or it is meerly Symptomatical, which hapning in a Malignant, or Spotted-fever, the Small-pox, Meazles, or Plague, it ſcarcely either can or ought to be repell'd or ſtopt by the foreſaid Remedies: For letting Blood is not proper; repelling Topicks, alſo cooling Julapes or Decoctions, or Narcoticks have no place: The chief intention of Curing will be to change the Eruption of Blood into a Sweat, for upon raiſing a gentle Sweat, the Flux of Blood, if it be not extreamly dangerous, ceaſes of its own accord.

Take water of Meadow-ſweet and Tormentil of each four Ounces: Of the cold Cordial of Saxonius *two Ounces. Treacle-water an Ounce and a half. Bezoartick Vinegar three Drams, Syrup of Coral an Ounce and a half, Confection of Hyacinth two Drams, make a Julape; the Doſe is ſix ſpoonfuls every third hour.*

Take Powder of Toads prepar'd half a Dram, Camphire two Grains; let it be taken with the foreſaid Julape every ſixth hour. (Or)

Take Pulvis Pannonici Rubri from half a Dram to two Scruples give it after the ſame manner.

Take Confection of Hyacinth three Drams, Pulvis Pannonici Rubri a Dram, Syrup of Coral what ſuffices; make a Confection, the Doſe is the quantity of a Nutmeg every other hour.

Take Roots of Biſtort and Tormentil of each an Ounce, Leaves of Meadow-ſweet, Burnet, Wood-ſorrel of each a handful, burnt Harts-horn two Drams, Shavings of Ivory and Harts-horn of each two Drams, boyl them in three Pounds of Fountain water to two Pounds, add towards the end Conſerve of red Roſes three Ounces, ſtrain it, the Doſe is three Ounces often in a Day.

So far of the firſt Indication which is Curatory together with the ſcopes of Curing and the forms of Medicines deſtinated for an Eruption of Blood from the Noſtrils, hapning either with, or without a Fever. The ſecond Indication which is Vital preſcribes only a thin Dyet, temperate Cordials, and a fit ordering of the Patient: The proviſion for the two former is ſo ſmall and eaſy, that it ſeems not neceſſary to ſet down a form

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and rules particularly for them: Concerning the latter the chief queſtion is whether we ought to keep thoſe that are ſeiz'd with an Eruption of Blood either in Bed, or out of it: It's an unqueſtion'd thing that thoſe that are weak, and ſubject to fall often into Swounding Fits, ought not to be ſtir'd from Bed, unleſs haply it be to try a Cure (as we have intimated before: As to others that are not ſo weak, we ſay thus, thoſe whoſe Blood has not an eaſy Tranſpiration by reaſon of the Conſtipation of the Pores, and upon its being put in a ſtronger Motion by the heat of the Bed is diſpos'd to greater Turgeſcencies, and to Eruptions, it will be good for them not only to ſtay out of Bed, while Bleeding, but likewiſe ſometimes to be cool'd by outward Applications in the whole habit of the Body, or at leaſtwiſe in moſt of its Members: Wherefore *Fabritius Hildanus* relates how he preſently Cur'd one of a violent Bleeding at Noſe, after many ordinary Remedies try'd in vain, by putting him into a Veſſel of cold water: With the like ſucceſs alſo *Riverius* having ordered another affected in like manner to be taken forth of his Bed, and laid on a Woolen Rugg in the Floor, fomented his whole Body with Linnen-cloaths wetted in an Oxicrate: Yet this method is not generally proper for all Perſons, and at all times: But on the contrary thoſe whoſe Blood being of a free Tranſpirable diſpoſition, and enjoying open Pores, readily evaporates, and is wont upon any moderate ambient heat to be reſolv'd into Sweat, and conſequently to become more calm, it's good for ſuch to continue in Bed, not only whilſt Bleeding, but as long as that Eruption is in danger of returning in a ſhort time after: For this reaſon it is that many Perſons ſubject to violent Eruptions of Blood live free from that Diſtemper during the Summer, whilſt they have a free Tranſpiration, but when the cold of the Winter preſſes them, their Pores being ſtopt, they undergo more frequent and dreadful Fits of it.

3. The third Indication being for Preſervation, which regarding the removal of the cauſe of the Diſtemper, either hinders the Eruptions of Blood, or renders them leſs frequent or leſs conſiderable, ſuggeſts to us theſe two chief intents of Curing: *viz.* Firſt, that the Blood being reſtor'd to its due Temperament and Mixture, be quietly circulated within its Veſſels without Turgeſcencies and Eruptions; And Secondly, that the Blood Veſſels be kept in their due State as to their Conformations of their little Mouths, and the Tones of their Muſcular Fibres, ſo that thoſe Veſſels neither cauſe thoſe diſorderly Sallyes of the Blood to the Head, or give way to its Eruption from the Noſtrils: For both theſe ends, in the firſt placelet the

Redundancy of the Blood, and its great foulneſs be provided againſt by a ſeaſonable Adminiſtration of Phlebotomy and Purgation; and then forprocuring and preſerving its right Temperament let the following Alteratives be given in fit ſeaſons for Phyſick.

Take Conſerve of red Roſes, and of the wild Roſe, of each three Ounces, Powder of all the Saunders, of each half a Dram, of Coral prepar'd a Dram, of the reddeſt Crocus of Mars two Drams, Sal Prunella four Scruples. With a ſufficient quantity of Syrup of Coral, make an Electuary, take early in the Morning, and going toBed the quantity of a Cheſnut either by it ſelf; or Drinking after it of the following diſtill'd water three Ounces.

Take of the tops of Cypreſs and Tamariſk of each eight handfuls, tops of St. John's*-wort and of Horſe-tayl of each four handfuls, all the Saunders bruis'd, of each an Ounce, Pith of White-bread two Pounds, being ſlic't very ſmall pour to them of New-milk eight Pounds, diſtill it with common Organs: Sweeten each Doſe as you take it with a ſufficient quantity of the Syrup of the Juice of Plantain.*

Take Leaves of Plantain, Brooklimes, and ſtinging Nettles of each four handfuls, being bruis'd pour to them of the foregoing water half a Pound, ſmall Cinnamon water two Ounces, expreſs it ſtrongly; the Doſe is three or four Ounces in the Morning at nine of the clock, and at five in the Afternoon.

Let Medicines of this kind be taken Spring and Fall for twenty or thirty Days, giving ſometimes a gentle Purge between whiles: But in the Summer let Mineral Chalybeat waters be Drunk for a Month, than which there is not a more excellent Remedy in this caſe. I ſhall now give you an example of one Cured of an Eruption of Blood, whoſe caſe was ſomewhat particular.

I was lately ſent to for advice for a Gentleman living far off who had been troubled a good while with frequent and violent Eruptions of Blood, ſometimes from the Noſtrils, ſometimes from the Hæmorrhoids; this perſon had been often let Blood by the advice of his friends, but found no good thereby, nay moſt commonly after opening a Vein falling into cold Sweats, and Swounding Fits, and ſtill as liable to Eruptions of Blood, he was wont to be much worſe: To this Perſon (not having ſeen him) I preſcrib'd Julapes, and cooling Decoctions, and Anodyns, alſo Juicy expreſſions of Herbs, and other things to cool the Blood, but theſe things alſo (as though all yet were far from the mark) had nothing a better ſucceſs; at length being call'd into the country to ſee him, I found the affect with which he was ſeiz'd to be meerly or chiefly Convulſive, for the Blood breaking forth daily, his Pulſe was weak, his Extream parts cold, and all the Veſſels were fallen, as though too much

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emptied: Moreover the Patient was troubled with a continual Giddineſs, and a Trembling of the Heart, and was taken now and then with Swounding Fits, or with the apprehenſion of it: Truly it was ſo far from it that the Blood ſhould break forth of the Veſſels by reaſon of any Redundancy or Turgeſcency, that rather on the contrary its Current was ſo extreamly low and ſmall, that it ſeem'd ſcarce able to maintain the Stream of Circulation: But the thing was, that often in a Day he ſenſibly perceiv'd ſomewhat on a ſudden to paſs privately ſometimes up, and ſometimes down his Body like a wind, and for the moſt part an Eruption of Blood from the Noſtrils or Hæmorrhoids followed the Tendency of that Motion. So that it was eaſy hence to conclude, that the moving Fibres of the Blood Veſſels, by which they are contracted, being ſeiz'd with Convulſions, drew ſuddenly every way in a diſorderly manner the Stream of the Blood, as ſmall and low as it was, and forc't it now and then to an Eruption: Which alſo was the eaſier done, becauſe the Lax and Gaping Mouths of the Veſſels permitted the Blood driven to them to flow forth without any due ſtay: A Method of Cure ordered purſuant to this Ætiology confirm'd it by its good ſucceſs: For Bleeding, and the uſe of Blood-ſtopping Medicines being thenceforwards omitted, I preſcrib'd the uſe of the following Powder whereof he took a Doſe every ſixth hour with a proper Julape.

Take Powder of the Roots of Male Peony, red Coral, and Pearl of each a Dram, Ivory, Crabbs Eyes, Blood-ſtone, of each half a Dram, Sal Prunella a Dram, make a Powder, the Doſe is half a Dram.

Take black Cherry water eight Ounces, Balm water and ſmall Cinnamon water, of each two Ounces. Treacle water an Ounce, Syrup of Coral an Ounce and a half.

I farther ordered that Ligatures ſhould be us'd in due courſe to certain places, and now and then to others as occaſion requir'd, both to ſtop, and to intercept the Convulſions of the Veſſels: And by theſe Remedies and ways of Adminiſtrations he ſoon grew well without any Relapſe.

CHAP.

CHAP. III.

Of Vesicatories.

HAving treated of the Emission, and stopping of the Blood, according to occasion, there remain certain other Humours, to wit the Nervous and Nutritious Humours, and likewise the Serous and other Excrementitious ones which are wont to abound within the Brain, Nerves, and within the Nervous and Fleshy Fibres, and even in the Pores of the Skin, and of the Solid parts, which being often depraved or letted in their Motion, require an Emission, being otherwise apt to prove greatly prejudicial, and often to cause dangerous Distempers: Wherefore for a seasonable prevention of affects arising, or which are apt to arise from such cause, Physick has found out certain other Emissaries to derive immediately, or mediately the foresaid Humours from the parts and places where they prove offensive: And those Emissaries are either continual, *viz.* Issues of various kinds, which as everlasting Sources continually discharge that Ichor or Excrementitious Humidity; or they are Temporary, when upon occasion the Scarf Skin being remov'd in some part of the Body, the extremities of the Vessels in the Skin are laid naked, and withal so irritated, that they discharge in a great abundance Serous Humours of a various Origine and Nature, and continue so too Evacuate them for some time, sometimes longer, and sometimes a shorter while. Now such a manner of drawing forth Serous Humours from the Exteriour Surface of the Body, or of some certain part of it is wont to be effected by Medicines call'd by the Ancients *Phænigms, or Synapisms*, by the Modern *Vesicatories*; of which (because their knowledge prepares the way to the Doctrine of Issues) we shall in the first place treat here, and shall particularly insist on the explication of these three things, *viz.* first it shall be shewn of what substances, and after what manner ordered, Vesicatories are prepar'd. Secondly, they being of various kinds, we shall declare what are the ways and manners of working in each, or at least in the chief of them: And Thirdly, we shall enquire for the Cure of what sort of affects they ought to be us'd, and to what places apply'd.

1. As to the first, the most simple Blisterers are either Fire, or

or Solid Bodies, or Liquors endued with Fiery Particles, which nevertheleſs are ſeldom put to this uſe by reaſon of the Terrour they give, and the Imminent danger leſt being roughly apply'd they do not ſo much Bliſter the Scarf-skin, as burn both this and the Skin, and other parts: What therefore is more ſafe and leſs to be dreaded, let Epithems made of Concrets which have ſmart Particles, or (as is ſaid) Potentially Fiery, be apply'd to the places to be Bliſtered; which being either more mild were call'd by the Ancients *Phænigms*, becauſe the Scarf-skin being remov'd they made the part red: Or in reſpect of the matter they were call'd Synapiſms, and were wont to be prepar'd of *Muſtard, Pigeons-dung, Squills bruis'd, Garlick, Milk of the Fig-tree*, and the like; or they were more ſtrong and for the moſt part conſiſted of *Euphorbium, Cantharides, Flammula Jovis, Batrachion, water Plantain*, with many other things, which being endow'd with a certain Burning or Corroſive quality are outwardly apply'd for the ſaid uſe, but inwardly taken are Poyſonous and often Mortal.

The Compoſitions and Forms of Bliſterers are manifold and of ſundry ſorts: Though one, or two, and the more ſimple the better, may ſuffice here, and in moſt caſes it's all one which you uſe: According to our wont we ſhall here ſet down ſome of the more ſelect, and moſt uſeful preſcripts of theſe ſorts of Medicines: And to ſay little here of *Dropax's, Synapiſms*, and *Phænigms*, which are now in a manner out of uſe: Almoſt all *Veſicatories* at this time made uſe of, have *Cantharides* for their Baſis.

Take Powder of Cantharides from half a Dram to a Dram, Powder of Ameos-ſeed a Scruple: Stale Leaven wrought with Vinegar what ſuffices; make a Maſs for a Playſter, ſpread part of it on Leather, and apply it to the part for twelve hours. This works infallibly and ſtrongly enough; but becauſe it is not compact and ſticking, but is apt to ſlide from the place where it is put, or to crumble, therefore for a more convenient application the following does very well, and is now every where in uſe amongſt moſt perſons.

Take Cantharides three Drams, Euphorbium half a Dram, Powder of Ameos-ſeeds a Dram, Melilot Playſter what ſuffices; let them be incorporated with a warm hand, uſing as much of the Powder as the Maſs of Playſter will receive. Let a ſufficient quantity of this be ſpread on Leather, and be apply'd for twelve or ſixteen hours.

Some uſe to incorporate as much of the ſaid Powder with Burgundy-pitch as it will receive, and to ſpread it on Leather, and then to cover the edges of this Playſter with another Maſs

Maſs of Playſter, made of Powder of red Saunders incorporated with Burgundy-pitch, ſo adminiſtring a Dropax and Veſicatory together: Moreover by applying continually the ſaid Playſter to the place rubified and ulcerated after the Scarf-skin is Bliſtered and remov'd, and by wiping it clean only once or twice a Day, and preſently applying it again, they make the little Ulcers, rais'd by Bliſtering, to run as long as they pleaſe, nay ſometimes above a Month, and to diſcharge a great plenty of Ichor, or Excrementitious Humidities,

Others ſew up Cantharides bruis'd and ſprinkled with Vinegar in a little Bag of very fine Silk, and apply them to the place to be Bliſtered,

Some Empiricks inſtead of Cantharides lay on the place to be Bliſtered a Maſs of the Leaves of *Batrachion*, or *Flammula-Jovis* bruis'd, by which the Scarf-skin being Bliſtered, or rather eaten away, the Skin it ſelf, as if toucht with an actual Fire, is often mightily inflam'd, and deeply ulcerated; whence not only a great diſcharge of Ichor, but ſometimes an Inflammation of the whole Member, and a Feveriſh Diſpoſition enſue, wherefore thoſe things muſt not be us'd without conſideration.

2. If we enquire into the manner and way how theſe and other Veſicatories operate, Firſt we muſt ſhew after what manner actual Fire, and things endued with Particles proceeding from Fire, cauſe a Bliſtering; and then by an eaſy Analogy we ſhall come to know the force and manner of working of thoſe ſorts of Medicines which are ſaid to contain a Potential Fire: Therefore concerning the former we obſerve that Fiery Particles, not apply'd too roughly, Penetrating the Scarf-skin without Solution of Continuity, enter the Skin it ſelf, where the extremities of the Blood Veſſels, Nerves, and Nervous Fibres, are terminated; and there altering theſe from their Poſition, wreſt them ſundry ways, and pervert the Conformation of the whole Texture of the Skin: So that from all the Veſſels being mightily irritated, a Watery Humour fill'd with Fiery Particles, and therefore rejected both from the Blood, and from the Nervous Juice, is voided in a great abundance: That Lympha, becauſe it cannot paſs through the Scarf-skin, ſeparates it from the Skin and raiſes it into a Bliſter.

Hence it will be eaſy to underſtand after what manner Veſicatories perform their operation: *viz.* Cantharides (and ſo all other things of the ſame vertue) being outwardly apply'd, and coming to be made warm by the *Effluvia*'s of the part they lie on, and ſo ſtirr'd up to exert their force, emit from them a great plenty of Smart and Fiery Particles as it were, which pene-

penetrating the Scarf-skin without breaking it; ſtrongly fix themſelves in the Skin: Where firſt they act on the Spirits and then by their means on the Humours and Solid parts: Thoſe Particles very much irritate the Spirits and make them cauſe painful Convulſions of the Fibres, and they fuſe the Humours and make them ſeparate into parts, ſo that the Watery part being mightily fill'd with thoſe Smart, and as it were Venemous Particles, is thrown off on every ſide by the reſt of the Latex: And the extremities of the Veſſels and Fibres being either in the mean time Eaten away by Burning, or open'd and emulg'd as it were by Twitching, that Ichor is voided in a plentiful meaſure from their little Mouths carrying with it the offenſive Particles. Which Ichor afterwards ſeparates the Impervious Scarf-skin from the Skin, and raiſes it into a little Bliſter. And after this is broken and remov'd, is plentifully voided for ſome time from the Ulcerated Skin.

But this is not only ſo done, becauſe the Serous Latex inbibing the Smart Particles of the Medicine, and conveying them forth, does not always carry them back all the ſame way that they came in; but ſometimes being imbued with thoſe Particles it regurgitates into the Maſs of Blood, and afterwards being circulated with it, and voided with its offenſive Load by other Emunctories, it offends in its paſſage or as it goes forth certain weak, or tender Ductus's. Hence many after the uſe of great or many Veſicatories having their Urinary paſſages thereby affected with an Acrimony or Eroſion, get a Strangurie which in ſome is moſt ſharpe and intolerable: Again in others troubled with the Stone that application ſometimes cauſes Bloody Urine: Hence alſo it may be ſuſpected, that tender Lungs, or ſuch as are inclin'd to a Conſumption, may be much endangered by the outward application of this Medicine: Which nevertheleſs I have not hitherto known happen to any; but rather on the contrary I can teſtifie by frequent trials that it rather proves to their advantage than to their prejudice: For the ſmart Particles of the Catharides, upon long application being ſometimes plentifully imbib'd by the Blood, infect its whole Serum; which Latex nevertheleſs ſo aculeated, as long as it is mixt with the Balſamick Blood, offends no part; but being ſeparated from it by the Reins, it ſometimes hurts them, and often not only twitches the Neck of the Bladder with its Acrimony, but ſometimes Corroding it fetches thence a Mucus, and little Schims, and even Blood it ſelf: But in the Maſs of Blood, thoſe ſame ſharpe Salino Volatile Particles often do great good; becauſe they deſtroy the fixt and acid Salts in it, and likewiſe open the too cloſe Texture of the Blood, and ſo cauſe its Serous

and other Morbifick Particles before faſt bound in it, to be ſeparated from it, and to be readily ſent forth by Urine and Sweat; hence in Fevers, Veſicatories long apply'd cauſe a large Evacuation by Urine and a free Sweat: Moreover the ſame open the Obſtructed paſſages, and ſtir up the Portions of the Blood and Serum ſtagnating in any place, or extravaſed, and reſtore them to Circulation: Wherefore they are wont to do good not only in Diſtempers of the Serum, but alſo of the Blood, nay in the Pleuriſie, Peripneumonia, and in any other Fevers whatſoever.

Hitherto having ſhewn after what manner Veſicatories work, firſt on the Spirits, and then on the Humours and Solid parts; I muſt next ſet down their effects both good and evil; alſo the manner of uſing them: That they work firſt on the Spirits it is plain from hence, that they exert no power on the Dead: And its an ill Omen in very weak perſons when Veſicatories do not work, becauſe it's a ſign that the Animal Spirits are mightily dejected, or leſſen'd in their ſtore.

Therefore to explain well the Energy, or Vertue of this Medicine, we muſt conſider what Humours it evacuates, or alters immediately or mediately: And then in what Diſeaſes, and in Bodies how diſpos'd it does good or hurt.

As to the firſt, the Humours immediately let forth by a Veſicatory partly iſſue from the Pores and Glands of the Skin, and partly from the Mouths of the little Arteries, and partly from the extremities of the Nervous Fibres; haply ſome little of the Juice freſh receiv'd may be caſt back again from the little Mouths of the Veins, though much of it cannot: The Humours mediately voided by a Veſicatory are thoſe which the foreſaid parts being emptied receive from elſwhere, and convey forth.

1. The Scarf-skin being remov'd by a Veſicatory from the Skin a Serous Humour is drawn from the Glands and Pores, and this not only from the place Bliſtered, but thoſe Pores being pervious to others, a Portion of Serum coming from other Pores ſometimes ſucceeds in the Cells of the firſt drain'd, and thence alſo diſtill forth, wherefore in an *Anaſarca* the little Ulcers rais'd by a Veſicatory empty waters on every ſide in great plenty, and derive them from all the Neighbouring parts, nay ſometimes from thoſe that are very remote.

2. The Mouths of the Arteries do not only Spew forth the Portion of Serum brought to them according to common courſe, but the Serous Latex being imbued with the irritative force of the Medicine in the whole Maſs of Blood is thereby ſeparated from the Blood in a more plentiful manner, and carried forth

forth by the ſaid Mouths of the Arteries, and with it other Excrements, and ſometime the Morbid matter it ſelf in a large meaſure: Hence in Malignant Fevers, nay and in ſome Putrid Fevers of a difficult *Criſis*, when the Refuſe and Corruptions of the Blood unapt for ſeparation threaten the Præcordia, or Brain-veſicatories deriving it forth continually and by degrees, often give great relief: To which may be added that the ſame alſo (as we have hinted before) alter and reſtore the Blood degenerated or deprav'd as to its Salts, and likewiſe by opening or rarifying its Texture, diſpoſe it to a *Eucraſy*: Wherefore this kind of Remedy often agrees excellently well, not only in a Feveriſh State of the Blood, but likewiſe when it is otherwiſe vitiated, or Cacochinical.

3. Reaſon and Experience convince us that Veſicatories draw from the extremeties of the Nerves, and Nervous Fibres the Latex contain'd within their Ductus's, and free it from Stagnation, and that they exagitate the Heterogeneous Particles mixt with that Latex, and deriving them from the Brain convey them forth, whence they are found of excellent uſe in Convulſive affects.

From theſe things we may gather for the Cure of what Diſeaſes this kind of Remedy is chiefly conducing; for in order to an Evacuation from the Pores and Glands of the Skin as often as a Serous, ſharpe or otherwiſe offenſive Humour is gathered together in or near them, and being excluded from Circulating with the Blood obſtinately ſticks there, certainly there is no readier, or eaſier way of clearing the ſame forth than by applying a Veſicatory on or beneath the place affected; wherefore it is not only indicated in an Anaſarca, and all Cutaneous foulneſſes and breaking forth; but a Veſicatory is likewiſe requir'd in Pains either of the Gout, or Scurvy any where fixt in the outward habit of the Body, or in ſome Member.

Secondly, Veſicatories are always us'd in Malignant Fevers in reſpect of the Blood, both to Purge it by degrees from all Heterogeneous and Morbifick matter, and to alter it from its two Acid, or Salt, or otherwiſe vitiated Diſpoſition into a due Temperament: Nay they are of moſt excellent uſe in all Putrid Fevers threatning ill, and of a difficult Determination: Therefore alſo in the Scurvy, Leucophlegmatia, the Longing Diſeaſe of Maids, and in any other Cacochimia that kind of Remedy does often great good: Again, Veſicatories are generally apply'd with good ſucceſs not only for correcting the Blood it ſelf, but likewiſe as often as being deprav'd it pours its Corruptions on the other parts, and ſo gives a beginning to Diſeaſes, and cauſes Fits of them in the Head, Thorax, Belly, or Members.

Wherefore in Head-aches, Vertigo's, and Sleepy affects this is a known and vulgar Remedy; and ſo in a Catharrh, and any Defluxion either into the Eyes, Noſe, Palate, or Lungs, every ordinary Man Preſcribs Cantharides for a Revulſory without adviſing with a Phyſitian. I muſt own that my ſelf having been often ſeiz'd with a violent Cough accompanied with much and thick Spittle (to which I am Originally inclin'd) have not found more good from any Medicine than from Veſicatories; therefore I am wont when that Diſtemper preſſes, firſt to apply Bliſtering-plaiſters on the Vertebræ of the Neck, then thoſe little Ulcers being heal'd, I apply them behind the Ears, and afterwards if need requires on the Shoulder-blades; for ſo the Serous Filth breaking forth in abundance from the diſſolv'd Texture of the Blood, is deriv'd from the Lungs, nay and the mixture of the Blood ſooner recovers its Craſis, its irregular Salts being by this means deſtroyed.

3. In reſpect of the Humour to be evacuated or deriv'd from the Genus Nervoſum and the Brain it ſelf, Epiſpaſticks as they are of moſt common uſe in Sleepy, Convulſive, and Pain-cauſing affects, ſo they often prove mighty beneficial: Was ever any one ſeiz'd with a Lethargy, Apoplexy, or Falling-ſickneſs, but preſently his Freinds or Attendants, though never ſo ignorant, flead his Skin with Cantharides? In ſtrange Convulſive Motions, uſually aſcrib'd to no leſs than Witchcraft, I have apply'd Veſicatories with great ſucceſs to many parts of the Body together, and by renewing them now and then in freſh places, I have continued them above a Month: Again fixt and cruelly tormenting Pains in the Membranous parts are ſeldom Cur'd without this Adminiſtration: For ſometimes Humours and Morbifick Particles, which being throughly radicated, yield not at all to Catharticks, or Medicines working by Sweat, or Urine, ſeem to be utterly rooted out by Veſicatories, laying hands, as it were, on the Diſeaſe.

Yet this Remedy though very general, does not work ſo readily and ſucceſsfully in ſome Diſeaſes and Conſtitutions; wherefore we muſt not uſe it inconſiderately, or indifferently to all perſons; for thoſe that have the Stone, and are ſubject to frequent and great Fits of the Strangury ſcarce ever undergoe its application without prejudice. Wherefore in perſons ſo affected we muſt not uſe Veſicatories but in Malignant Fevers, or in Acute Diſeaſes of the Head to prevent a greater Miſcheif.

As to the various Temperaments and Conſtitutions of Men, in reſpect of which Veſicatories agree or diſſagree, more or leſs: Concerning theſe things this threefold notable difference preſents it ſelf, fiirſt ſome in a manner always bear the uſe of this

this Medicine well, and the little Sores made in the Skin by it diſtill forth the Excrementitious Humidities plentifully enough without any Diſury or great Inflammation of the place Bliſtered, and then heal of their own accord: Which effect happens only in a Blood of a good Temperament, where the Salt and Sulphur being in a moderate quantity and in a due ſtate, there is a good plenty of Serum; whoſe Latex receding readily and in a copious manner from the reſt of the Blood takes with it the ſmart Particles of the Medicine imbib'd, and partly diſtills them forth by the place Bliſtered, and partly conveys them out by the Urinary paſſages without offending them: On this account alſo thoſe good effects before mention'd are produc't in the Maſs of Blood.

But Secondly, this Medicine does neither agree, nor work well with others, for it makes the place on which it is apply'd mighty red, or rather excoriats it with a violent Pain, and a great Inflamation: And yet the little Sores there made, though they torment the Patient a good while, caſt forth but a very little Ichor, or ſcarce any at all: Moreover in thoſe to whom Bliſtering always proves ſo torturing, a cruel Stangury for the moſt part ſucceeds it: This troubleſome and withal unprofitable uſe of Veſicatories happens very frequently to Men of a hot and cholerick Temperament, whoſe Blood contains Salt, and Sulphur, in a great plenty, and but a little Serum, which is wholly tainted with the others: Wherefore when its Latex which ought to carry off the ſmart Particles of the Medicine, does not part readily, nor in a plentiful manner from the reſt of the Blood (to wàſh them away preſently) thoſe Particles ſtill ſticking in the Skin, Taint and Poyſon, as it were, the Blood in its paſſage, and being thereby hindred in its Circulation, they cauſe it to gather together and ſtagnate within the extremities of the Veſſels, whereby they are inflam'd: Moreover the Serous Latex at length ſeparated by the Reins, being but in a ſmall quantity and ſharpe of it ſelf, and made more ſharpe by the Particles of the Medicine, irritate the Neck of the Bladder, and often corrode it with its Acrimony.

There remains a Third, though more rare caſe, of perſons Bliſtered, in whom the little Sores rais'd in the Skin preſently pour forth the Serous Humour in ſuch abundance, that there is ſtreight way need of repelling Medicines, and ſuch as cloſe the Mouths of the Veſſels; otherwiſe upon the too great Efflux of waters a Diſſolution of the ſtrength, and a failing of the Spirits are endanger'd to enſue: I have known this to have happen'd ſo conſtantly in ſome, that they were forc't for the time to come to abſtain from the uſe of Cantharides, how great ſoever the need

need were of them: The reaſon of which ſeems to be that the Blood being endowed with an Over-ſalt aud ſharpe Serum had its Texture too eaſy to be diſſolv'd: Beſides this great Efflux of Serum rais'd upon the firſt application of a Veſicatory, it hapning ſometimes late in Malignant Fevers, and in others of an ill or no Criſis, and continuing for ſome time, wholly drains the Morbifick matter, and often frees the Patient from the very Jaws of Death: In ſuch a caſe after that the little Sores have voided little, or an indifferent quantity of Ichor the firſt Days, at length nature attempting a Criſis this way, a vaſt quantity of Serous-filth flows from the ſame; and ſo continues to flow forth for many Days, nay ſometimes Weeks, till the Patient lookt upon before as given over, recovers his perfect Health: As it is not eaſy to heal the little Sores ſo flowing in abundance, ſo it is not ſafe to do it before the whole Seminal Root of the Diſeaſe be ſpent: Not long ſince a famous Dr. of Phyſick of *London* recovering with much adoe of a Malignant Fever, had in many parts of his Body places Bliſtered, daily diſtilling forth a plenty of Ichor, after ſome time (they being troubleſome and tedious to him) he apply'd ſtrong Repercuſſives to them all, and ſo preſently ſtopt all Iſſue of Matter: Thoſe Sources had been ſcarce ſtopt two Days, but falling into a Relapſe of his Diſeaſe, on a ſudden he was ſeiz'd with a Languor of the Spirits, and frequent Fainting Fits, with a cold Sweat, and a low and weak Pulſe; and not being able to be reliev'd by any Remedies, however cordial they were, he died within three Days: The cauſe of which ſeems to be that the Malignant matter ſuddenly ſtruck back into the Nervs of the Heart; whoſe action being thereby hindred, the Vital Function ſoon fail'd.

CHAP.

CHAP. IV.

Of Iſſues.

VEſicatories differ from Iſſues in this, that theſe are ordered for longer continuance. Moreover the former for the moſt part being requiſite in Acute Diſeaſes and others, whoſe Morbid matter requires a ſpeedy removal, regard chiefly the taking away of the Conjunct cauſe of the Diſeaſe, and therefore are made of a good breadth, but ſuperficial withal, that ſuch running Sores being large may evacuate much Matter, and then be eaſily Cur'd: But on the contrary Iſſues being chiefly indicated for Preſervation, are deſign'd for removing, or overcoming the Procatarctick cauſe of the Diſtemper: Wherefore they conſiſt of a narrower, but deeper Orifice, made through the whole thickneſs of the Skin, ſo that letting forth the Morbifick matter ſtill in leſs quantity, they derive it farther, and continue longer to empty it forth.

Concerning Iſſues there are theſe three chief heads of enquirie *viz.* Firſt what Humours chiefly thoſe Emiſſaries evacuate, and whence they derive them. Secondly, in what Diſeaſes and Conſtitutions they agree better, or worſe; And Thirdly, in what places, after what Form, and with what Inſtruments they ought to be made.

1. As to the former, Iſſues in like manner as Veſicatories Purge forth all Humours within the Skin, though lying in a leſs compaſs, or ſuch as are convey'd through it both from the Sangui-ferous and Nervous Veſſels; nor do they only like Veſicatories irritate and draw from the outward Superficies of the Skin, but perforating the whole Skin, convey forth whatſoever flows from the ſides of the Orifice through the broken Veſſels, and whatever comes from elſewhere under the hole: Wherefore not only the Humours gather'd together within the Pores and Glands of the Skin, or convey'd thither by the Arteries and Nerves flow to Iſſues, but moreover the Serous Excrements under the Skin, which are wont to be convey'd, or to paſs from place to place through the Interſtices of the Muſcles and Membranes, tend to them from all parts, and there find their way forth. Again, an Iſſue made in a fit place anticipates Morbifick Humours, which are wont to be convey'd to parts

parts that are weak, and long afflicted, and so frees sometimes this part, sometimes that, from their Incursion: Hence the Gouty, or Nephritick, or Colick, nay sometimes the Paralitick, or Scorbutick matter is intercepted by Issues in its passages from its Sources to the Weakned places or Receptacles; and so the usual Fits of the Disease being evaded, is convey'd forth: And this Emissary even as Trenches cut for draining Fenny moistures, empties forth by degrees Humours sticking in any part or region of the Body, and there doing hurt, and so it prevents or cures a Morbid Disposition.

2. From these various ways of giving relief, with which Issues are wont to do good in general its easily gathered for what affects chiefly they are required; for though there be in a manner no Disease, in which this Remedy either does hurt, or proves useless, yet it seems more necessary in some cases than in others; it's prescrib'd even by the vulgar for almost every Distemper of the Head, both outward and inward: Every ordinary person advises an Issue above all things for the Convulsions of Infants and Children, for the Inflammation of their Eyes, their Swellings of the Kings-evil, and so for Head-aches, Sleepy, Vertigious, or Convulsive affects of Adult or Aged persons: Nor is this Remedy less extol'd against Diseases of the Breast; is there any one subject to a Cough, Bloody or Consumptive-spitting, or to an Orthopnæa, who has not an Issue made him? In like manner also Issues are commended for affects of the Belly, there is scarce any Hypochondriacal person, or Hysterical Woman, and no Gouty or Cahectical person but have their Skin pierc't in more places than a Lamprey. It would be a tedious thing to recount here particulary all the Distempers for which Issues are good.

3. Nevertheless this Remedy, however good and useful of it self, does not agree with all persons, nor therefore must it be indifferently prescrib'd to all: For there are two sorts of Men, who thongh they happen to be sick, may be excus'd from Issues; because this Emissary evacuates too much in some, and in others little, or less than it ought, and in the mean time is mighty painful and intolerable.

An Issue sometimes does not agree well because it evacuates or spends too much the Humour, or Spirits: For I have observ'd in some that an Issue made in any part of the Body voids forth an Ichor in quantity immoderate, and in quantity vitious; for out of it at frequent times, if not continually, a Watery, thin, and fætid Latex, often making the Pea, and coverings black, flows in a great abundance, so that from its too great Efflux the Strength and Flesh are consum'd.

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An Iſſue ſometimes vioding forth no very great quantity of Ichor ſpends the Spirits and Strength more than it ought, which is known by the effect, and ſometimes not till afterward; to wit, becauſe ſome upon keeping one or more Iſſues open, grow weak and lean, and upon their being ſtopt, become preſently more Vigorous, and of a full habit: Moreover it's a common obſervation that many upon having an Iſſue made near the Head, have been ſoon after ſeiz'd with ſome defect and weakneſs in their Sight, ſo that they were forc't preſently to cloſe it up, which ſeems to happen for this reaſon, becauſe where the ſtock of Spirits is but ſmall, and their conſiſtency very thin, little ſpendings of them, or of the Juice out of which they are engendered, in caſe they are continual, are with difficulty endur'd.

Moreover in an other, and that a different reſpect, Iſſues, as alſo Veſicatories are forbidden to ſome, or are preſcrib'd to them with great caution; becauſe voiding little or ſcarce any thing at all, they mightily torment the place in which they are made: For thoſe who being of a Cholerick, or otherwiſe hot Temperament, have their Maſs of Blood thicker, and of a cloſer Texture than it ought by reaſon of its being but little diluted with Serum, in theſe perſons a Solution of continuity being made, and kept in being by an Iſſue, the Blood (not depoſing Serum enough to keep it ſelf free) ſticks it ſelf in the paſſage, and ſo being extravaſed cauſes a mighty painful Inflammation; and in the mean time ſuch an Iſſue voiding ſuch a very ſmall quantity of Ichor proves as uſeleſs as troubleſome.

As to the places where Iſſues are to be made, they are to be choſen according to the ends of Curing, or the intentions requir'd from them; which are chiefly theſe three, *viz.* Firſt, a general Evacuation of Humours from the whole Body. Secondly, an Evacuation, and at the ſame time a Revulſion from ſome particular Member. Thirdly, an Evacuation and at the ſame time a Derivation from ſome particular Member. In reſpect of the former it's proper to have an Iſſue cut in the left Arm; The Second intention requires it to be made far from the part affected, and the Third near it.

For theſe ends, *viz.* ſometimes this, ſometimes that, or the other Iſſues are wont to be made, and that either by Inciſion, or a Cautery, or Perforation, in every Region of the Body, *viz.* in the Head, Breſt, and Abdomen, and in the Arms and Leggs, nay in moſt parts of each, and in their Orifices Peas or Wooden Peas, Pellets, or Pledgets are put, and there continued for keeping them open. By running through the Parts

and Members of the Body, we ſhall obſerve the chiefeſt places, and kinds of Iſſues.

Some order an Iſſue to be burnt by a Cautery in the Coronal Suture, and recommend it for withdrawing the Humours and evacuating them from the Brain and its Envelopings: Though ſome make a common Practice of this, yet I have found it not to have ſucceeded well in many; ſo that I have ordered many Iſſues ſo made on the Crown of the Head to be clos'd up, And this not without being taught by reaſon and experience: For the Blood conveys much Filthy Matter towards the place where it uſes to diſcharge its Excrements, and depoſes it in the whole Neighbourhood, and eſpecially in the part affected (as being weaker and more apt to receive them) whence it often happens that the Diſeaſe is rather increas't than Cur'd: For the ſame reaſon, *viz.* to derive Humours from the inward part of the Head outwards, others make Iſſues in the *Bregma* on the Sagittal Suture, and others in the hinder part of the Head about the beginning of the *Lambdoides*: But the ſame exception lies againſt theſe as againſt the former. Certainly an Iſſue made in the Arm much better anticipates the Morbifick matter which is wont to be depos'd about the inner parts of the Head, if made in the Legg it revulſes it, and made a little beneath the Head it derives it thence. Hence for great affects of the Brain, and its Meninges, in Infants and Children, we cut an Iſſue on the Nape of the Neck: To Adult or Aged Perſons we apply a Cautery on both ſides the Spine betwixt the Shoulder-blades: And there we often make two Iſſues capable of containing many Peas with great ſucceſs. As to Iſſues cut or burnt behind the Ears, or a Setaceum paſt through its Carneous Lobe; I have obſerv'd theſe things to have been ſeldom advantageous, but often troubleſome; becauſe a Solution of continuity made in theſe places neither diſcharges much Ichor, nor laſts long, for the Orifice though fill'd with a Pea, or Pill, will be covered with a thin Skin growing over it in deſpite of all we can do.

Iſſues in the Back do excellently well, not only in Diſeaſes of the Head by evacuating and deriving the Morbifick matter, but likewiſe in the Gout, Stone, and all Colicks, by anticipating the Matter that feeds the Diſeaſe, and intercepting it as it paſſes to its lurking holes, which is plainly made appear by Experiments and Obſervations made in perſons reliev'd by them.

Iſſues betwixt the Shoulder-blades are good for Diſeaſes of the Breſt; alſo in the Arm, or Legg to evacuate or anticipate Humours flowing towards the Lungs, and to withdraw the

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ſame there depos'd: That an Iſſue in the Thorax cut betwixt the Ribbs ſometimes derives immediately the Conſumptive matter from the Lungs, we have ſhewn elſewhere.

The Region of the Abdomen ſeems unfit to have an Iſſue in any part of it: Nevertheleſs the Practice of ſome, though it be rare, is much cried up, which order that a large Iſſue capable of containing many Peas, be burnt on the Region of the Spleen for all hypochondriacal affects; I have known this done in ſome without any great good, certainly not enough to recompence the trouble of ſuch a Remedy.

Some time ſince by an Iſſue in the Groin I ſucceſsfully Cur'd a mighty weakneſs and ache in the Loins, not yielding to any other Remedies, and in another perſon an inveterate Sciatica: For the Glandulous Emunctories ſeated in that place, imbibe a great ſtore of Excrements of the Blood and Nervous Liquor, which if forthwith diſcharg'd from them, and that in a continued manner, it will conduce much to the freeing of the Neighbouring parts from any Morbifick Seminal Root.

The Thigh being a large Member ſeems fit enough for bearing many and large Iſſues to evacuate Humours plentifully from the whole Body, yet it does not happen ſo in many, partly becauſe having a Figure too much declining like an inverted Cone, there is no convenient place for binding to keep in the Pea; and partly becauſe a Solution of continuity made amongſt the meetings of many Tendons, proves frequently Inflaming and Painful; ſo that it has been found neceſſary ſometimes when an Iſſue has been made there to cauſe it preſently to be cloſed up again to free the Perſon from Pain, and the trouble of Lameneſs: Though in ſome it does better, becauſe an Inflammation does not always happen to the place perforated, and a Ligature apply'd to it, continues ſtedfaſt to thoſe that uſe to Garter above the Knee.

Moreover we muſt not only make choice of a fit part of the Body for an Iſſue, but likewiſe of a fit place in the Member where it is made, which particularly requires the Judgment of a Phyſician, or skilful Chirurgion: For we muſt be very careful that a Cautery or Inciſion be not admitted over, or too near the Tendons or greater Veſſels: Nor muſt an Iſſue be made in the very Body of a Muſcle, but in the Space or Interſtice betwixt the Muſcles; where the hole muſt paſs the whole Skin, and ſo much farther till the little Membrane of the Muſcle underneath be penetrated, wherefore this operation is not to be committed indiſcreetly to Quacks and others ignorant of Anatomy; for upon an ill performance herein there enſues not only a Fruſtration of all good, but often great pre-

judices thence ariſe, nay ſometimes even to the hazard of Life.

It's needleſs for me here to deſcribe the way of preparing and compounding a Cautery, or the figure and uſes of the Inciſion Inſtrument for making Iſſues, for theſe are commonly known, yet it will not be amiſs to diſcourſe ſomewhat here after what manner we muſt deal with the Symptoms which happen to thoſe Emiſſaries after they are made, and hinder or pervert their Energies.

There being many and ſundry ſorts of affects hapening to Iſſues, a Cure is not requir'd for them all, but only for thoſe of greateſt moment: Therefore in the firſt place it is needed whenever an Inflammation happens to the part or place where it is. Secondly, if the Orifice voids more or leſs Ichor than it ought. Thirdly, if the Sore be apt to dry up of its own accord, and now and then to be covered with a little Skin, or to grow rank with a Spungy Fleſh growing up in its Circumference. As to the leſſer defaults, as when the Sore bleeds often, or if changing its place it gets by little and little into a worſe, with many others in which it's wont to prevaricate, it will not be worth while to mind them here.

1. An Inflammation ſometimes happens to an Iſſue, and that ſometimes ſo great that it threatens a Spacelus or Mortification of the part, nay and ſometimes brings it: Now ſuch an affect comes either upon the freſh making of the Orifice, or happens afterward by reaſon of the Blood and Humours being upon ſome occaſion put in a Commotion, and ruſhing in a throng to that place.

When an Iſſue is firſt made, preſently by reaſon of the Solution of continuity, and conſequently the Blood's being ſomewhat letted in its Circulation in that part, ſome Inflammation and Soreneſs happen to all perſons: But in ſome who have a very hot Blood, and little diluted with Serum, this proves much more violent, there hapening ſometimes a Mortification of the part inducing a Spacelus: Or Secondly, the Blood there ſtagnating is chang'd into a Pus to be evacuated by an Abſceſs: Or Thirdly, which more frequently happens, and ought to be always procur'd in our caſe, the Blood cauſing an Inflammation is return'd again into the Veſſels, and reſtord to its Circulation by other Ductus's into which it is forc't.

But that it be convey'd back theſe two things are neceſſarily requir'd, *viz.* Firſt, that it be much diluted with Serum there plentifully abounding, or rather protruded into the part; And then Secondly, that the emptied Veſſels behind the Tumour Drink up again

again the Blood diluted by the Serum, and driven back: For the Blood driven toward the Tumour, when it can go no farther forward, yet at leaſt that upon leſſening its Bulk it may go back, diſcharges Serum plentifully from it ſelf, and drives it into the places obſtructed; which entring into the ſtagnating Blood, dilutes it, and getting into its place drives it into the Ductus's of the Veſſels; and that Serum in the mean time paſſing forward exhales through the Pores, and ſo the Blood which was extravaſated being diluted, and ſent back by the Serum, and the Serum it ſelf evaporated, the Tumour with the Inflammation vaniſh by degrees: But in caſe (as it often happens in hot Temperaments) the Blood extravaſed and driven into the Pores be not diluted with a plentiful acceſs of Serum, it will not only ſtick there with obſtinacy, but will cauſe a violently Inflamed Tumour with a Fever, and ſometimes other dreadful Symptoms. Not long ſince a great Divine whoſe Blood was thick and hot, having an Iſſue made in the inſide of his Legg, though the Skin only was cut, an Inflammation ſhortly followed, which grew ſo violent within a few Days that it could ſcarce be hindred from turning to a Gangreen by the uſe of any Remedies whatſoever. Wherefore when the Blood extravaſated through a Solution of Unity, and wanting an acceſs of Serum for diluting it, and carrying it back, tends to a violent Inflammation, Fomentations, and Cataplaſms of Emollient things outwardly apply'd often do much good, becauſe the moiſt and mild Parricles parting from them, enter the ſtagnating Blood, and dilute it, and ſo giving it a gentle motion cauſe it to return more readily into its Veſſels; ſo that thoſe moiſt applications outwardly us'd ſupply the defect of the inward Serum requir'd for diluting the Blood: Nevertheleſs that the Blood ſo diluted, and put in motion be reſtor'd to Circulation, it's farther neceſſary that the Veſſels which are to receive it be ſufficiently emptied, for which end beſides a ſlender Diet, Bleeding and Purging are often of neceſſary uſe; and indeed it is uſual to Purge and often to Bleed Cacochymical, and Plethorical perſons a little before, or after an Iſſue is made. Nor are theſe Remedies only proper to prevent or remove an Inflammation in caſe of a freſh Iſſue, but are likewiſe good whenever that affect happens to an Iſſue of a long ſtanding: For if at any time the Blood being very impure, and withal Feveriſhly boiling enters upon an Excretory Turgeſcency, it often falls out that it depoſes its Excrements and Filthy Dreggs about the Iſſue, being hardly to be Purg'd elſewhere, and that it being there hindred from its Circulation upon their being heapt together, is extravaſated, and ſo cauſes

a violent Inflammation: Such an affect lately hapening in an Ancient Nobleman, and at firſt neglected, ſoon turn'd to a Gangreen, from which nevertheleſs by the help of proper Medicines carefully adminiſtred both inwardly and outwardly, he eſcapt not without great danger of his Life.

2. If at any time an Iſſue diſcharges too much Ichor, which for the moſt part is thin, and of a very ill Smell, and ſometimes diſcoloured, ſo that ſuch vaſt Spendings of Humour, and withal it's intolerable Stench requires a Cure: In ſuch caſe there are two chief Therapeutick intentions, *viz.* Firſt, to ſtrengthen the mixture of the Blood that its Texture be not too prone to a Diſſolution, and Fuſion of Serum: And Secondly, to preſerve the place Ulcerated by the Iſſue, and to keep it free from any Corruptive Ferment, ſo that no Noyſome Filth there lodg'd may defile the Blood as it paſſes through in circulating, whereby being infected it may preſently run into parts, and be forc't to depoſe the Serum there in ſuch abundance.

The former ſcope of Curing orders ſcarce any thing but now and then a moderate Purge, and a good Diet, *viz.* that the perſon keep himſelf from all Surfeits, and irregularity as to the quantity, quality, and ſeaſons of taking his Food; and particularly from thin Wines, Cider, and other Acid Liquors, with which the Blood is wont to be fus'd, and driven to flowings of Serum: For Perſons ſo affected moſt ſurely pay for any errour or irregularity committed in Diet, a Pain preſently being rais'd about the Iſſue.

For the due Preſervation of the Tone of the place where the Iſſue is made, and for keeping it free from Putrefaction, you muſt take a particular care that for avoiding all Naſtineſs, both the Solids to be put into the Orifice, and the Coverings, be they either Plaiſters, Ivy Leaves, or Oyl-cloaths be chang'd twice a Day: For in ſome each of theſe ſoon gets an ill ſavour, and preſently cauſes the Ulcer of the Iſſue to ſtink: In caſe this tends to Putrefaction, preſently inſtead of a Pea, or Woodenpill, let a Pill of Virgin-wax incorporated with red Saunders and Verdigreaſe be put into it; and likewiſe let a Fomentation of the Decoction of *St.* John's Wort, Yarrow, Centory, *&c.* be apply'd Morning and Evening.

3. Sometimes it happens that an Iſſue even as a dryed Fountain, diſcharges no Humour: The reaſon whereof uſually is either becauſe the hole being not deep enough does not penetrate the whole Skin, which is eaſily Cur'd by making it deeper; or the Sore though large and deep enough, yet ſtill continues dry becauſe the Serum does not readily nor freely ſeparate from the Maſs of Blood, this having too cloſe a Tex-

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ture, and then the only Remedy is to wear within the Orifice, Solids more irritating, and working more ſtrongly on the Mouths of the Veſſels: For which purpoſe Pills are made of the Wood of Ivy, of Box, or of the Roots of Gentian, or of Hermodacts, and are often us'd with good ſucceſs.

4. It often falls out that the Orifice of an Iſſue being too ſmall, and diſtilling forth little Ichor is covered over with a thin Skin with the Pea included in it, and that with the hole it is heal'd up: For which default there is ſcarce a proper Remedy to be apply'd; wherefore (rather than ſtill to fret the Skin to no purpoſe) it's better to let ſuch an Iſſue cloſe up, or to transfer it to ſome other place.

5. The Sore of an Iſſue inclining to heal, and being hindred from it, has very often about its edges, and ſometimes in its Cavity a Spongy Fleſh growing up; the reaſon whereof is that the Nutritive Juice convey'd to the ends of the Arteries, and Nervous Fibres, and not preſently waſht away by the Serous Ichor, ſticks there, and beginning to be aſſimilated extend, both thoſe Veſſels to fill the Cavity with Fleſh; and the Blood in the mean while brought thither Forms within that Maſs little Sprouts of Veins for its return; nevertheleſs that Fleſh, as yet rough and ſhapeleſs, being kept from the greateſt part of the Orifice, grows up above its Brim, and when it is riſen ſo high that it can be no longer veiled and covered with the Skin, it continues ſtill Naked and Spongeous: This Excreſcency is eaſily enough Cur'd by ſprinkling on it Eſcharotick Powders, of burnt Allom, Colcothar, or Mercury Præcipitate; for theſe ſorts of Medicines with their Acrimonious and Stiptick force eat away the Fleſh thus Luxuriant, repel the Nutritive Juice, and ſhut cloſe the Mouths of the Veſſels. When that ſuperfluous Fleſh grows continually and increaſes about the edges of an Iſſue, it's a ſign that the Nutritive Juice abounds more there than the Excrementitious Humour, and conſequently that in perſons ſo affected that Emiſſary is not ſo very beneficial, wherefore under the pretext of this reaſon many are mightily averſe from that Remedy (which certainly is inoffenſive in moſt, though it be not equally advantageous in all.)

There is now an unperſwadable opinion which has taken footing amongſt many here in *England* (I know not if it be ſo in other Countries) that an Iſſue or Iſſues dipoſe to Barrenneſs; wherefore to all married Women, and deſirous of Children, this ſort of Remedy, though otherwiſe never ſo conducing to their Health, is Religiouſly forbidden; though no reaſon is yet given for this ſtrick Prohibition; only ſtories are told of certain Women having Iſſues who are Barren; when it is as eaſy to

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ſhew more Barren Women without Iſſues; and many fertile with them: And truly I uſe to retort this as a chief Argument againſt that opinion, there being no need of any other.

CHAP. V.

Inſtructions and Preſcripts for Curing Cutaneous affects.

IN the Firſt place the Cuticle or Scarf-Skin being void of Life and Sence has ſcare any Diſeaſes belonging to it: This ſometimes being too compact hinders Tranſpiration; ſometimes alſo by reaſon of ſome Accidents it becomes too groſs and callous in ſome places: But of it ſelf being abſolutely inſenſible, it is not Diſtempered, though it be the cauſe that ſome affects, to be paſt off haply by Tranſpiration, ſtick about the Superficies of the Skin; becauſe the Recrements and Filthy Dreggs of the Blood and Humours being driven outward and having paſt the whole Skin, when by reaſon of the cloſe Texture of the Scarf-skin they are not able wholly to breath away, fixing on the outward part of the Skin, they produce various diſcolourations and foul affects thereof: Of which ſort chiefly are thoſe we call Summer Spots, alſo Scorbutical and Malignant Spots, and likewiſe Spots and any other Stains whatever bedecking the Skin, or Scarf-skin with any Marks or Specks without any tumour or unevenneſs.

As to the affects of the Skin it ſelf in general, in regard they are various and of ſundry ſorts, they are wont to be diſtinguiſht in a various reſpect, and firſt of all that they are either with or without a Tumour: We took notice of theſe latter even now.

Cutaneous affects with a Tumour are either univerſal, diſperſt through the whole Body, or particular, rais'd in theſe or other Members at random, and as it were by chance.

The former either happen in a Fever, as chiefly the Small-pox, Meazles, and other Malignant Puſhes, to which alſo may be added the Flitting breaking forth of Children which ſoon vaniſh; or they come without a Fever, as eſpecially the Itch, the running Scab, and Leaprous affects.

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Particular outward Tumours hapning ſometimes in one part, and ſometimes in another, for the moſt part are not only belonging to the Skin, but alſo to the parts under it, *viz.* ſometimes to the Fleſh, Membranes, or Glands, and conſequently are of a various Nature and a differing Form. It would be too long to treat of all theſe here particularly, therefore at preſent I ſhall briefly ſpeak meerly of Cutaneous affects ſuch as before mention'd.

Firſt, as to Summer Spots it's a ſign that they proceed from Choller and other yellow Recrements of the Blood, becauſe they are moſt familiar to thoſe that are yellow Hair'd; again they happen to the Faireſt Complexions, and in parts moſt expos'd to the Sun and Air, becauſe their Skin being of a ſubtle Texture tranſmits the Humour rarified by the heat of the Sun, ſo far till it be ſtopt by a thick Scarf-skin, near the places where it ſhould break forth: This affect as to the State of Health does not foreſhow or threaten any ill: Theſe Spots differ little or nothing from thoſe they call Lenticular Spots.

There are other large Spots about the breadth of the Palm of the Hand which defile the Skin in many places, but eſpecially about the Breſt and Back with Stains ſometimes of a dun colour, ſometimes wan, or blackiſh. Theſe being wont to riſe and go away at certain times, and as I have obſerv'd in many, in certain parts, are commonly call'd Liver-marks, though not properly, for theſe Stains happen on this account, that the Filthy Dreggs and Refuſe of the Blood, when not ſufficiently receiv'd by the Veſſels of ſeparation, are carried to the Skin together with the Serum, with which they are diluted, and there being thrown off by the Blood, and left by the Serous Latex which evaporates, they ſtick faſt to the outward Pores and little Orifices, as a Moſſy down does to the narrow paſſages of a River.

Thoſe Spots appear chiefly in the Summer, and moſt upon the Back and Breſt, *viz.* at that time, and in thoſe places that Men are moſt apt to Sweat in; that is to ſay, that Serous Latex which has carried thoſe Filthy Dreggs from the Maſs of Blood to the narrow Pores of the Skin, leaves them there, as being unmeet to paſs forth by Evaporation. This affect has no evil joyned with it, nor is it the Symptom of any preſent Diſeaſe, nor does it portend any ſhortly to enſue, and in regard for the moſt part coming in places out of ſight it cauſes no deformity, or trouble, there ſeems little or no need of its Cure: But becauſe an opinion is ſpread amongſt the vulgar, that the Liver is much in danger by reaſon of thoſe Spots, and that it neceſſarily requires help, therefore to ſatisfy ſome im-

portunately desiring Physick; besides outward Cosmeticks we are wont to prescribe inward Hepatick Remedies; the use of which though not very necessary, yet because thereby the Blood is purified, and the Obstructions of the Bowels are open'd, they are not altogether in vain. The inward Medicines useful for this purpose are set down before amongst Hepatick Remedies: The very same outward Remedies, or Topicks are proper in this, as in all other kinds of Spots, of which we shall give you some choice Forms.

Having treated elsewhere professedly concerning Spots of the Plague and Scurvy, I need not repeat them here; especially because the Method for these is quite differing from that of the other; For in one kind of Spots in a manner only outward Medicines are wont to be administred without any that regard the Heart or the Viscera of the Belly, and in the other only inward things are given without applying any thing to the Skin.

Therefore as to the Summer Spots, Lentiginous Spots, and the vulgarly call'd Liver Spots, the Art of Beautifying properly takes care of them, and for removing these Blemishes from the Skin, only Cosmetick Remedies are prescrib'd without any Method of Cure; there is an infinite store of these amongst curious Ladys, and others that are nice in keeping the Skin fair; but all of them having regard only to two intentions of Curing may be reduc't to these two heads: *viz.* either by opening the Pores of the Skin, and Scarf-skin, and sometimes by excoriating this, they endeavour to draw the Humour outward, and wholly to evaporate it; or on the contrary they are administred, and that with no less success to strike back the Impure Matter which makes the Spots, and to drive it inward: I shall here set down some ordinary Forms of Topicks of both kinds, which have been rationally invented, and often us'd successfully enough; since I may not without offence to great Persons unvail the more secret Mysteries of the Cosmetick Art, and prostitute them to the vulgar.

First, therefore to cleanse the Skin, and to draw the Matter of the Spots outward.

Take of a small Lixivium of Salt of Tartar four Ounces, Oyl of bitter Almonds made by expression what suffices, let it be mixt in such a proportion that the whole Liquour presently turn white, and so let it stand: Let the parts affected be anointed and gently rubb'd Mornings and Evenings with this mixture.

Take fresh Roots of Aron, Briony, and Solomons-seale, of each an Ounce, Powder of Fenugreek Seeds a Dram, Camphire half a Dram, being brus'd together pour to them Oyl of Tartar per Deliquium

three

three Ounces, express it, let it be apply'd with a Ragg dipt in it twice a Day.

Take Sulphur-vive powdred an Ounce, black Soap two Ounces, bind it in a Ragg, let it hang in a Pound of Vinegar for nine Days, then apply it to use, washing and rubbing the places affected with it twice a Day.

Secondly, for the other intention, *viz.* for discussing the Spots from the Skin, and repelling the matter, and driving it inwards. *Lac Virginis* was a famous Medicine amongst the Ancients, and is still commended and us'd by many. The preparation of this is well known, viz. *a Solution of Litharge made in distill'd Vinegar, by the affusion of Oyl of Tartar per Deliquium is precipitated into a Liquour as white as Milk: With which let the Face and Hands be washt and gently rubb'd twice a Day: A Medicine like this, or the same, at leastwise of the same Vertue is prepar'd of a Solution of Minium or Ceruse made in the same Menstruum, and precipitated with water of Allom, or Sal Gemm.* (Or)

Take Camphire slic'd two Drams, bruise it in a Glass-mortar pouring on it by little and little the Juice of one Limon, then add to it of White-wine a Pound, strain it and let the Camphire remaining behind be tyed in a Ragg, and hung in a Glass.

Take Verdigrease four Ounces, pour to it of White-wine two Pounds, being put into a Gourd-glass, let it be distill'd in Sand, let the Phlegm first coming off be kept for use, wherewith let the Face be anointed twice a Day. For this purpose also the Dew or Phlegm of Vitriol distill'd by it self does excellently well; some are content with the water of Bean-flowers, or the simple distill'd water of Fumitory, or with the water which Bleeds from the Sprout of a Vine, cut in the Spring: But the more curious Women and Pretenders to the most exquisite knowledge in the Cosmetick Art are scarce satisfied with any Remedies for the Skin but Mercurial: Wherefore the following water is highly recommended and sold by Empiricks at a great rate for all Blemishes of the Face.

Take Mercury sublimate an Ounce, being reduc't to a Powder let it be put in a Tin-vessel with three Pounds of fountain water, let it stand for twentyfour hours stirring it now and then with a Woodden Spatula till the whole Liquor grows black, which nevertheless being filtred through Cap-paper becomes clear; a Ragg or Feather being dipt into this, let the Face be gently done over with it once in a Day or two.

This Medicine is of great efficacy against all foulness of the Skin, for it clears the Humours sticking in the little Pores and Orifices, though never so strait, and dissolves the obstinate and inveterate Combinations of the Salts and Sulphurs, and as to

any ill Conformation of the Pores, it restores the whole Skin, and makes it freely perspirable. Wherefore it is not only good for cleansing the Stains or Blemishes of the Face, but likewise for removing Pushes, and the redness of it, and Erysipelous affects: Moreover it sometimes happens that many parts of the Face, but especially the Nose and Forehead are thick beset with blackish Specks as though burnt by Gunpowder; which nevertheless proceeds from hence, that the Sudatory Pores are fill'd sometimes with a black thick Humour, sometimes with little Worms having black heads, (which little insects being squeez'd forth of the Pores, and laid in the Sun are easily perceiv'd to live and to move themselves) and in such an affect of the Skin, no Washes or Ointments but Mercurial are wont to do good: Nevertheless a too severe Sting often goes a long with this Honey: For the Particles of the Quicksilver, together with the Salts (with which they are minutely divided and quickn'd) being apply'd to the Face, discuss thence the offensive and defiling Matter from the Pores, and drive it away, and being struck inward they follow it, and soon insinuate themselves with ease into the Blood and Nervous Liquour (whose Crasis they injure) and through their means very frequently pass their Venom, often not to be rooted out afterward into the Brain, and sometimes into the Præcordia, and other parts: Hence it's frequently observ'd that Men or Women using long and much a Mercurial Ointment, become subject to the Vertigo, and Convulsive, or Paralytick affects, and that their Teeth turn black, and sometimes grow loose.

CHAP.

CHAP. VI.

Inſtructions and Preſcripts for the Cure of the Pſora, or the Scab with the Itch.

AFter the more ſimple affects of the Skin which hapning without any Tumour or Sore, ſoil it only with Filthy Spots, I ſhall now ſpeak in order of the greater affects diſſolving continuity: And in the Firſt place of the Pſora or Scab which moleſts the Skin in moſt places of the Body with ſmall Puſhes, or breakings forth, being ſometimes dry and often ſcaly without much Itching, as in perſons of a Cholerick or Melancholick Conſtitution, ſometimes moiſt and diſpos'd for Ulceration with a mighty troubleſome Itching, as in Perſons of a moiſt Temperament, with a foul Blood: And this affect is moſt peculiarly a Diſeaſe of that part, ſeeing that it often has its beginning in the Skin it ſelf by outward Contagion, and is frequently Cur'd by certain Remedies apply'd only to the Skin; at leaſtwiſe the reaſon of both holds good ſo far that it's ſeldom perfectly gotten, or Cur'd by other means.

This Scab, or Itch is commonly deſcrib'd to be a breaking forth of Puſhes here, and there through out the whole Body, proceeding from a ſharpe and ſalt Humour gather'd together within the Pores of the Skin; and by reaſon of its mighty Itch, cauſing a neceſſity of ſcratching to diſcuſs it thence.

I conceive the Morbifick matter of the Itch to be the Lymphick Humour conſtantly reſiding in the Glands of the Skin, but degenerated from its Genuine, *viz.* Salino-volatile Diſpoſition, into an Acid, or otherwiſe vitiated Temper.

That Lymphick Humour is wont to be depraved theſe three ways, and conſequently falls into a Coagulative and Vitious habit with the Serum newly ſupply'd from the Blood: *viz.* Firſt, the Blood it ſelf being very impure, and withal diſſolv'd leaves a great ſtore of its corrupted and Filthy Dreggs in the Glands of the Skin, which becoming there a Leaven more Corruptive, ſtrongly ferment, and are coagulated with other adventitious or tranſient Juices, and ſo bring forth not only Scabby affects, but Leaproſies of divers kinds; hence frequent and continual feeding on Shell-fiſh and others, and on Salt Meats, and ſuch as have been dry'd in the Smoak or Sun: Alſo improper Drinks, and

and Venemous Medicines taken into the Body cauſe breakings out all over the Skin, and thoſe often very dreadful.

Secondly, the Humour gathered together within the Glands of the Skin ſometime putrifying by meer Stagnation does not only breed Scabs, but alſo frequently Lice. Wherefore not only Perſons long Impriſon'd, but likewiſe ſuch as leading a Sedentary Life uſe themſelves withal to Stench and Naſtineſs, are ſtill ſubject to the ſaid affects.

Thirdly, if haply thoſe cauſes are wanting, that the Glandulous Humour of the Skin be neither defil'd through the fault of the Blood, nor its own Stagnation, yet a Virulent infection from without diſpoſes it as readily to produce thoſe Diſeaſes, as it's daily manifeſted to us, the Effluvia flowing from the Puſhes of a Scabby Skin, being of no leſs efficacy than Barm or Yeſt, whereof if a very ſmall Portion be put into new Ale unfermented, it preſently ferments the whole Maſs, be it never ſo great, and changes it into the nature of the Liquour whence it was taken.

Therefore the Itch as to its Origine, either is taken by Contagion, or by reaſon of an ill Dyet, its Incentive and Fuel is communicated from the Chyle and Maſs of Blood being vitiated, or through naſtineſs and want of Perſpiration it's generated in the Skin it ſelf: To which we may add that Infants ſometimes get this evil Hereditarily contracted from their Parents.

Though this Diſeaſe be never Mortal, or very dangerous of it ſelf, but always eaſy of Cure, yet it has often an ill iſſue, becauſe being long continued it mightily vitiates the Blood, and the Nervous Liquour; and if Cur'd on a ſudden, the Matter which is driven from the Pores being inwardly receiv'd, brings a pernicious Taint on the Præcordia and Brain, or on other Noble parts.

The greateſt danger from the Itch threatens Children, and Cachectical Perſons, becauſe in both theſe the Taint of the Cutaneous Humour is more eaſily ſent into the Noble parts, which after the outward Contagion of the Itch is taken away, remaining within, cannot be throughly overcome but by a great deal of Phyſick (which neither of them can well bear) wherefore ſuch perſons ought to be preſerv'd with all care and diligence from the Itch, as from the Plague it ſelf.

Concerning the Cure of the Itch there are two primary Indications, and both of them twofold: *viz.* the Firſt being Curatory has regard to theſe two things, that the Glandulous Humour (its Corruptive ferment being wholly extinguiſht) be reſtor'd to its due Craſis. And then Secondly, that the Pores

and

and Paſſages of the Skin it ſelf being freed from thoſe Concretions of Ichor recover their Ancient Conformation or free Perſpirability.

The Second Indication being Preſervatory, provides againſt theſe two things, *viz.* Firſt, that the Impurities and Corruptive Miaſms of the Itch, which are driven from the Skin when the ferment is Purg'd, do not regurgitate into the Blood, and Nervous Liquour, and cauſe not only Diſcraſies in them, but likewiſe (as it often falls out) bring great damage to the Brain and Præcordia. Secondly, it muſt be endeavour'd that the infectious Taint of the Humours and Noble parts, contracted from the Scabby Matter, be eradicated at the ſame time that the Naſty Diſtemper of the Skin is Cur'd.

All theſe intentions of Curing ought to be complicated, or at leaſtwiſe to be interchangeably proſecuted by Remedies both inward and outward us'd together, to the end that the Morbifick matter being chaſed from its private Receptacles, may not any where retire and lie hid in any lurking places, but being perſued by Medicines in all parts both within and without, may be wholly remov'd; therefore Purges ought always to begin and end this Method of Cure, whatſoever *Helmont* ſays to the contrary, and I dare affirm that this Diſeaſe is ſcarce ever Cur'd eaſily, and never with ſafety without that Medicine. Moreover open a Vein one of the Firſt things you do, unleſs ſomewhat indicates the contrary; beſides theſe, let alteratives have their turns, ſuch as purify the Blood, and ſtrenthen the Viſcera, and fortify them againſt the Incurſions of the Scabby Matter: And in the mean time let Liniments, or Baths, or Topical Remedies of other kinds, and appropriated to the Skin be apply'd, for without them, not only Cathartick's and Bleeding, but even Diaphoreticks, Diureticks, nay any kind of Medicines whatſoever evacuating or altering the Blood and Humours prove of no effect: We ſhall ſet down ſome ſelect Forms of the Medicines of each kind before mention'd: And Firſt, for due Purging give a Purging Medicine, or a Vomit the firſt thing you do: Alſo after Bleeding (if it be neceſſary) let the perſon uſe a Purging Apozeme, or Ale for ſeven or eight Days.

Take the Electuary Diacarthamum three Drams, Species of Diaturbith with Rhubarb a Dram, Cream of Tartar, Salt of Wormwood of each half a Scruple, Purging Syrup of Apples what ſuffices, make a Bolus to be taken with Governance. (*Or*)

Take Sulphur of Antimony ſeven Grains, Scammony Sulphurated eight Grains, Cream of Tartar half a Scruple, make a Powder.

Take Roots of Polypody of the Oak, and of ſharpe pointed Dock prepar'd of each an Ounce, Leaves of Sena ten Drams; Turbith,

Agarick,

Agarick, Epithimum of each an Ounce, Carthamus Seeds half an Ounce, yellow Saunders two Drams, Seeds of Anniſe, and Caraway of each two Drams, being ſlic'd and bruis'd digeſt them cloſe luted and warm in four Pounds of White-wine for twentyfour hours, pour off the clear Liquor without expreſſion, the Doſe is ſix Ounces by it ſelf, or with a ſpoonful of Syrup of Epithimum. (Or)

Take the foreſaid Ingredients and boyl them in ſix Pounds of fountain water, to half, then add of White-wine a Pound, and ſtrain it preſently; make an Apozeme, give it after the ſame manner. (Or)

Take Roots of Polypody of the Oak, and of ſharpe pointed Dock of each three Ounces, the beſt Sena four Ounces, Epithimum, Turbith, Mechoacan of each two Ounces, yellow Saunders an Ounce, Coriander Seeds ſix Drams, let them be prepar'd according to Art, make a Bagg for four Gallons of Ale, after five or ſix Days drink it, and take to twelve Ounces more or leſs every Morning for eighe or ten Days.

For ordinary Drink let a little Veſſel of four Gallons be fill'd with ſmall Ale, into which put the following Bag.

Take tops of Tamariſk, Fumitory dryed of each four handfuls, Roots of ſharpe pointed Dock dry'd ſix Ounces, Rinds of Bitter-ſweet two Ounces, being ſlic't and bruis'd mix them; or let a Boucher of the Decoction of Sarſaparilla, Saunders, with the Shavings of Ivory, Harts-horn, Licorice, &c. be taken.

As to altering Remedies beſides the Phyſick Ale for ordinary Drink there ſeems not need of many others, only that a good Dyet be obſerv'd by avoiding Salt and Peppered Meats, Shell-fiſh and others which have been laid in Brine: Alſo let them forbear Wine, ſtrong Waters, ſtrong Beer, and all Liquors apt to trouble the Blood too much, and to ferment it: In an obſtinate Scab, ſeizing a Cacochymical Body it's proper to give the following Electuary with the diſtill'd water twice a Day.

Take Conſerve of Fumitory, of the Roots of ſharpe pointed Dock of each three Ounces, Troches of Rhubarb, Species Diatrion Santalon of each a Dram and a half, Salt of Wormwood a Dram, Vitriol of Mars four Scruples, with a ſufficient quantity of Syrup of Cichory with Rhubarb, make an Electuary, the Doſe is from a Dram to two Drams twice a Day, drinking after it of the following diſtill'd Water three Ounces.

Take Firr Tops ſeven handfuls, Leaves of Fumitory, Agrimony, Female Fluellin, Liver-wort, Brook-limes, of each four handfuls, Roots of ſharpe pointed Dock two Pounds, Rinds of Elder two handfuls, the outward Rinds of ſix Oranges, being ſlic'd and bruis'd, pour to them Whey made with midling Ale eight Pounds, diſtil it in common Organs, let the whole Liquor be mixt.

Oint-

Ointments to be anointed on the Skin are preſcrib'd moſt frequently, and that very effectually for Curing the Itch: Though thoſe that are us'd to many other Tumours and Sores do no good here: But Sulphur and preparations of it, ſeem to have a certain Specifick Vertue in this Diſeaſe, ſo that they are ingredients in almoſt all Ointments for the Itch, and are the baſis of the whole Compoſition. This is a very common receipt with the vulgar.

Take of the Powder, or Flowers of Sulphur half an Ounce, Butter without Salt four Ounces, Ginger powdred half a Dram, make a Liniment.

Somewhat a neater preſcript, though not much more Efficacious, is after this manner.

Take Ungentum Roſatum four Ounces, Sulphur-vive powdred half an Ounce, Oyl of Tartar per Deliquium what ſuffices, make a Liniment, to which add Oyl of Rhodium a Scruple, to give it a ſcent.

When you will ſtrengthen or raiſe the Energy of the Sulphur by the addition of other things.

Take of the Ointment of Elecampane without Mercury four Ounces, Powder of Sulphur half an Ounce, Oyl of Tartar per Deliquium what ſuffices: For the ſame purpoſe an Ointment is made of the Roots of ſharp pointed Dock boyl'd in Butter, or Oyl with White-wine till the Wine be conſum'd; and with Sulphur and Oyl of Tartar. Moreover thoſe Ointments are ſometimes us'd by themſelves, by curious perſons abhorring the ill odour of the Sulphur.

The Third kind of Liniment againſt the Itch is made of *Mercury* needing no aſſiſtance from Sulphur, or Vegetables; nay this being more than enough efficacious of it ſelf, is not wont to be apply'd to the whole Body, but only to the Joints of the Arms and Leggs, or being put in a Girdle is to be worn about the Loins, for ſo it ſeldom fails of Curing the Itch: Nevertheleſs there is danger leſt this Practice (as it often happens) cauſes ill and pernicious Symptoms: Frequently after the Mercury Ointment a Salivation, ſometimes alſo a Scotomia, or Sleepy, or Convulſive affects enſue: Moreover ſometimes the Poyſon of the Medicine produces within the Præcordia, or Viſcera, horrible affects of the Aſthma, Lipothymia, or Bloody-flux.

The vulgar Form of a Mercural Ointment for the Itch, and very much in uſe, is this.

Take Quick-ſilver reduc't into minute parts with an Acid, and (as they call it) Killd, an Ounce and a half. Freſh Hoggs Lard ſix Ounces, incorporate them well by ſtirring them a long time in a Stone or Glaſs Mortar.

Nor only in the Form of a Liniment, but many other ways the foreſaid Medicines may be us'd: For the Fume of Cinnaber (which is prepar'd of Mercury with Sulphur,) caſt on the Coals, and taken in at the Mouth, or breathing againſt the Superficies of the Body, Cures the Itch: The Mercurial Coſmetick water before written made about half weaker, and apply'd to the Skin with a little Cloath in the Soreſt places, kills the Itch: Yet the uſe of theſe is not ſo very ſafe as to be generally adminiſtred to all perſons.

Of Sulphur and Vegetables either ſeparately, or conjunctly, boil'd in water Baths are prepar'd, which Cure this Diſtemper, not by waſhing off only the Filth of the Skin as common Baths, but likewiſe by deſtroying its ferment: Beſides theſe there is yet another eaſier, and much more neat way of Curing the Itch, *viz.* by boiling a Shift in fountain water with Powder of Brimſtone, and after it is dryed in the Sun, or before the Fire to wear it four or five Days next the Skin: For ſo that Diſeaſe is wont to be Cur'd without Bathing, or the Naſtineſs, or ill Odour of an Ointment.

Poor people uſually Cure themſelves of this Diſtemper only by taking the Powder of Brimſtone in Milk inwardly, and by anointing themſelves with the ſaid Powder mixt with Butter outwardly: Sulphur ſeems to be ſo Specifick an Antidote againſt the Itch by reaſon of its Balſamick Vertue which deſtroys the Acidities, and all Exotick and Corruptive Sharpneſſes of the Blood and Humours, and reſtores to each Latex a Benign, that is, a Mild, and as it were Oyly Nature.

As to Mercury, it's no wonder if medicines made of it, perfectly Cure any places of the Skin infeſted with the Itch whereever they are apply'd: For by the application hereof breakings forth, and all Virulent Ulcers, *viz.* any that are Venereal and Scorbutical are wholly conquered: Moreover it ſeems not ſtrange that this Medicine apply'd to ſome particular place ſhould Cure an inveterate Itch in caſe it raiſes a Salivation; but ſometimes it Cures without any ſuch thing, as when a perſon wears a Girdle of it; to this we ſay that the Particles of the Mercury paſs then into the Venous Blood, and after being diffus'd through its whole Maſs, are driven outward from all parts, and depos'd in the Skin where they kill the Itch, and when it happens that theſe Mercurial Particles are all again evaporated through the Skin, after the Cure is performed, then no Salivation, or other inconvenience enſues.

CHAP.

CHAP. VII.

Inſtructions and Preſcripts for the Cure of the running Scab, or the Leaproſie of the Greeks.

AFter the Scab with the Itch, it follows that we treat of another affect ſomewhat allyed to it in its breaking forth in Puſhes, which is commonly call'd the running Scab, by ſome a Tetter or Ringworm, or Morphew, by others the Leaproſie of the Greeks; but the Names of this affect being variouſly confounded, and the Nature of it haply being differing in ſeveral Countries, I ſhall deſcribe it as it is now underſtood by us.

The running Scab begins and affects perſons after this manner, *viz.* Firſt little red Wheals or Puſhes, ſometimes ſingle, ſometimes many of them joyn'd together, ariſe in many parts of the Body, but eſpecially in the Arms or Leggs; and grow at length in heaps or cluſters; the Surface of each Scab when grown in cluſters appears rough, and ſomewhat whitiſh and ſcaly, ſo that upon ſcratching, Scales fall away, and a thin Ichor often iſſues forth, though its ſoon dryed again, and hardens into another cruſty Scale.

Theſe cluſters of Puſhes at firſt are but ſmall and few, as in the Arm or Legg, or ſome other particular Member, haply three or four appear to the bigneſs of a peny or two pence: Afterwards if the Diſeaſe be ſuffer'd to increaſe, they break forth in many places, and grow to a crowns breadth, and at length if not ſtopt, cover not only particular Members, but the whole Body with a whitiſh Leaproſie, which rais'd to this degree was judg'd for the moſt part incurable by the Ancients.

Theſe breakings forth in ſome are only temporary, as coming in the Winter, and going away in the Summer, in others on the contrary they come in the Summer, and vaniſh in the Winter: In many others this Diſtemper is continual, having no time of remiſſion or mean.

The running Scab differs from the Itch, that in this the Puſhes are generally ſingle, and ſeparated from each other, though but by ſmall ſpaces, but in the other they riſe in cluſters: Again the Itch is extreamly infectious, but the running Scab is not ſo.

This Diſeaſe is alſo diſtinguiſht from the Leaproſie, that this

is likewiſe as infectious as the Itch, and its breakings out are much more violent and terrible than in the running Scab, *viz.* being crufty and ſcaly, and diffus'd in a continued manner throughout the whole Body.

Hence it appears that the material cauſe of the running Scab is not a meer Cutaneous Humour depraved and degenerated from its Craſis by reaſon of ſome Corruptive Effluvia's receiv'd from without, or upon other occaſions; becauſe the infection is not eaſily communicated to others, as in the Itch, nor preſently diſperſt through the whole Body; but the Puſhes firſt breaking forth about the beginning of the Diſeaſe ſeem to proceed from hence, that ſome Acido-ſaline Concretions happen in the Maſs of Blood (like Tartar in Wine) which ſeeing they can neither be ſubdued, nor again diſſolv'd are driven to the Skin, as to the ſides of the Veſſel.

This Diſeaſe takes its riſe for the moſt part on two chief occaſions, *viz.* Firſt, from an ill Diet, as from frequent eating of Salt Meats, Pork, Shell-fiſh, or others, or Secondly, from the corrupted Seminaries of other Diſeaſes left in the Body, as eſpecially of the Scurvy, and French-pox ill or not Cur'd.

For Firſt, thoſe ſorts of Food either becauſe they are rank, or otherwiſe diſproportion'd, convey Particles to our Blood, that cannot enter a due mixture with it, or are not eaſily maſtered by it: To which Heterogeneous Particles gather'd together in great abundance by long continuance of ſuch Diet, Saline Particles of all kinds readily aſſociate themſelves, and ſo make Tartarous Concretions, which are driven to the Skin, and are the Seminaries of the running Scab, or Leaprous affects.

Secondly, the Miaſms of the Scurvy and French-pox left in the Body, and at long run rais'd to the higheſt degree in Combinations of Exorbitant Salts and Sulphurs, engender a moſt plentiful Seminary of this Diſeaſe: For the corrupted Taints of the Blood, after that upon long continuance they are become wholly Heterogeneous and unſubdueable, gather to themſelves at length the Saline Particles, with which growing together in that Tartarous Concretion, and driven to the Skin, they produce Eruptions of the running Scab.

Concerning the Cure of the running Scab there are two primary Indications, *viz.* the Preſervatory which regards the cauſe of the Diſeaſe, and the Curatory which has regard to the Symptom, *viz.* the breaking forth of Puſhes: The Vital has ſeldom place in this caſe, unleſs grown altogether deſperate, where there is a deficiency of Sleep and Strength: The Method of Cure ought always to begin with the Preſervatory Indication, which removes the cauſes of the Diſeaſe by inward Remedies,

Remedies, for otherwiſe outward things are ſcarce ever adminiſtred to any purpoſe (as in the Itch) but the roots of the Diſeaſe being cut off within the Blood, the Cutaneous Puſhes ſoon dye away: Though for removing them we muſt proceed one way when the running Scab begins of it ſelf, and ſomewhat a differing way when it comes after an inveterate Scurvy, or the French-pox, ill or not Cur'd: We ſhall conſider each of theſe caſes ſeverally and diſtinctly by themſelves.

When therefore this Diſeaſe is ſimple, and primary, and freſh coming, let the evident and external cauſes be remov'd, let the ill Diet and the Unwholeſomeneſs of the Air be corrected; therefore let perſons who have been long and too much us'd to feed on Salt Meats, Pork, or Fiſh betake themſelves to a Diet of good Juice, and eaſy of Concoction. Moreover if they live by the Sea ſide, or in Marſhy places, let them remove to a more dry and clear Air; and withal let them be as careful of their Drink, avoiding thick and dreggy Beer, and thin and acid Wines which are too much fill'd with Tartar: Finally let them take care that their Drink or Food be not prepar'd of Mineral waters apt to petrify.

2. In reſpect of the Conjunct and Procatarctick cauſe, *viz.* a Saturation of the Blood with Saline Particles of a differing Diſpoſition and Nature, there are two chief intents of Curing; to wit, that the Blood and Humours be forthwith cleans'd of their impurities: and that the Acido-ſaline Diſcraſies, of the Blood and Nervous Liquour be altered for the better to keep them from engendring a Tartarous matter: For which ends both evacuating Remedies of divers kinds, and alteratives are wont to be preſcrib'd: Nevertheleſs becauſe not all but in a manner only great Remedies are here proper, therefore thoſe that are chiefly in uſe, and found to do moſt good, are Catharticks, Bleeding, Whey, Mineral waters coming from Iron, Juicy expreſſions of Herbs, Decoctions of Woods, Chalybeat Medicines and Salivation: We ſhall ſet down certain Forms of each of theſe, and the manners of uſing them.

In the Firſt place therefore, a general Purge and Bleeding (as in the Cure of the Itch) being premitted, let the following Cathartick Infuſion or Tincture be preſcrib'd, whoſe Doſe is from ſix Ounces to eight, to be repeated within ſix or ſeven Days.

Take Roots of ſharp pointed Dock dryed, of Polypody of the Oak of each half an Ounce, Sena ten Drams, Epithymum ſix Drams, Rhubarb, Mechoacan, of each half an Ounce yellow Saunders two Drams, Celtick Spike half a Dram, Salt of Tartar a Dram and a half, put them in a Glaſs with three Pounds of White-wine, and

a Pound of Elder-flower water; let them ſtand cloſe covered in a cold place for three Days, then uſe it, pouring forth daily a ſufficient quantity of the clear Liquour,

Secondly, to ſweeten the Blood, and cleanſe it from its Salts, drink every Morning to two or three Pounds of Whey by it ſelf, or with Fumitory, preparations of Cichory, and with ſharp pointed Dock infus'd in it, and let this Drink be continued for twenty or thirty Days if it agrees with the Stomack, and withal in the Evening and early in the Morning let a Doſe of the following Electuary be taken.

Take Conſerve of the Roots of ſharp pointed Dock ſix Ounces, Crabbs Eyes, Coral prepar'd of each two Drams, Ivory a Dram, Powder of Lignum Aloes, yellow Saunders of each a Dram and a half, Sal Prunella two Drams, Vitriol of Mars a Dram and a half, Syrup of the Juice of Wood-ſorrel what ſuffices, make an Electuary, the Doſe is two Drams.

Thirdly, for the ſame reaſon as Whey, alſo Mineral waters coming from Iron are preſcrib'd againſt this Diſeaſe, and often do great good: For when all other Medicines have prov'd of no effect, I have ſometimes Cur'd a great and almoſt Leaprous running Scab with this alone: Moreover to add to their efficacy we may fitly joyn the uſe of Sal Prunella, or of Vitriol of Mars, or of the Electuary before written.

Fourthly, in ſome perſons having much Serum, and a Watery Conſtitution, where drinking of Whey, or Mineral waters is not proper, it is good for them to take conſtantly a Decoction of Woods at Phyſical hours, and likewiſe for their ordinary Drink.

Take Raſpings of Willow-wood half a Pound, Roots of Sarſaparilla eight Ounces, white Saunders, Wood of the Maſtick-tree, of each two Ounces, Shavings of Ivory and Harts-horn of each ſix Drams, Shavings of Tin, crude Antimony of each four Ounces, both tyed in a Rag; Licorice an Ounce, let them infuſe according to Art, and boil in ſixteen Pounds of fountain water to half, keep the ſtraining for uſe.

Fifthly, *Chalybeat Medicines*, becauſe generally accounted of among the more excellent Remedies, are ſeldom omitted in this Diſeaſe, though they as ſeldom prove ſucceſsful: For a great many preparations of Iron in which the Sulphurous Particles predominate for as much as they ferment the Blood, and put it upon Excretory Effervescencies, encreaſe rather than diminiſh the Eruptions of the running Scab: Nevertheleſs Vitriolick Salts, Syrups, Tinctures, and Infuſions in regard they fix the Blood, and ſomewhat reſtrain the Exorbitant exceſſes of the Salts, anſwer aptly enough to the intention of Curing

now

how propos'd, but being too weak cannot maſter ſo Herculean a Diſeaſe.

Wherefore Sixthly, theſe, and a great many other Remedies doing no good, many recommend *Salivation* as the ſtouteſt Champion, and only fit to contend with ſo potent an Enemy: Yet the event does not always anſwer this mighty expectation, for I muſt own to have try'd this Remedy my ſelf in four perſons afflicted with a greivous running Scab, not yielding to other Medicines, but without any benefit; ſome of theſe were put in a very high Salivation by a Mercury Unction, others by Pills of the Solar Præcipitate, which Salivation they lay under for about twenty Days, after which time all the Scaly breakings forth, and cluſters of Puſhes vaniſht: Nevertheleſs for perfecting the Cure a Diet Drink ordered of the Decoction of Sarza with frequent Sweating under a Cradle, and due Purging betwixt while was continued for a Month: Yet this courſe being ended when no footſteps of the running Scab ſeem'd to be left behind, within the ſecond Month a new ſtock of the ſame Diſeaſe beginning to ſpring forth, grew up in a ſhort time to its wonted Maturity: Moreover when one of theſe perſons would repeat this Medicine, and another after two returns of the Diſeaſe would try it a third time, both of them at length deſpair'd of Cure after they had underwent ſo much Miſery: Whence it appears that the French-pox though Malignant in the higheſt Nature, and cauſing moſt Filthy and Virulent Ulcers conſuming the Fleſh and Bones, may much more eaſily and certainly be Cur'd than the running Scab.

The reaſon of it is, that the cauſe of the Pox conſiſts in a Malignant and altogether Heterogeneous Miaſm defiling, and as it were Poyſoning the Blood and Nervous Liquor for ſome time, though not wholly ſubverting their Craſis, or utterly depraving them for the future: Wherefore that Cure is perform'd by Salivation, or a Sweating Diet, extirpating all that Venom, the Genuine Diſpoſition of the Blood and Humours then remaining: But in a deep ſort of running Scab the Elementary and Originally compoſing Particles of the Blood are corrupted, ſo that unleſs the Craſis and due Diſpoſition of theſe be reſtor'd, all ſorts of Evacuations, and Purgings of the Malignant and Venemous matter, though never ſo full and eradicative will effect little or nothing: Wherefore it is not without ground that many famous Phyſitians formerly have judg'd this Diſeaſe when confirm'd, and drawing near to a Leaproſie to be hardly or never Cur'd.

2. No better event attends this Diſeaſe when it ſucceeds an inveterate Scurvy: Haply the intentions of Curing are ſomewhat

what more certainly pitcht upon when this affect is ſuppos'd to be the baſis or root of that: *viz.* the Therapeutick intention being thence taken, we inſiſt chiefly on Antiſcorbutick Remedies; but yet the more ſmart and hotter things of this kind, as *Scurvy-graſs*, *Creſſes*, *Horſe-raddiſh*, *Pepperwort* and other things irritating the Blood too much, in regard they more diſſolve its Craſis, and drive the Tartarous Concretions more plentifully to the Skin, are always found rather prejudicial than advantageous: And for this reaſon the uſe of *hot Baths* or *Bathing* in hot waters, which in regard it evacuates the Humours of the whole Body by a moſt plentiful Sweat, and cleanſes the Pores of the Skin, and mightily purges them, may ſeem to be very available in this Diſeaſe, moſt commonly is ſo far from doing good, that the Eruptions are wont thence to be mightily encreaſt, and exaſperated: For I have known many perſons not very much over-gone with the running Scab, who going to our *Bath* to bathe themſelves in the hot waters have return'd thence perfectly Leaprous: Wherefore when this affect is a Symptom ariſing from the Scurvy, all Smart, and Elaſtick things being avoided, let only the more temperate, and ſuch as are endow'd with a Nitrous, Vitriolick, or Volatile Salt be adminiſtred: We ſhall give you ſome kinds and forms of each of theſe ſorts. In the Firſt place things chiefly excelling in a *Nitrous Sal* are *Chryſtal Mineral*, the *Juices or Decoctions of certain Herbs, and ſome Purging Mineral waters.*

Take Chryſtal Mineral, or Nitre purified to the higheſt degree an Ounce, Flowers of Sal Armoniack a Dram, bruiſe them together in a Glaſs Mortar, give to a Dram thrice or four times in the ſpace of twenty four hours.

Take Leaves of the great Houſe-leek two handfuls, being bruis'd boil them in two Pounds and a half of freſh Milk till it turn to Whey and Curd, being ſtrain'd let the clear Liquour be taken to a Pound twice a Day.

Take Leaves of Dandelyon ſix handfuls, being bruis'd put them in a Glaz'd Earthen Pot with a cover, which put in an Oven after the Bread is drawn, and let it ſtand for ſix or eight hours, then the Maſs being put in a ſtrainer let the clear Liquour run out, the Doſe of which is from four Ounces to ſix thrice or oftner in a Day.

Cucumbers being endow'd with a Nitrous quality are found by experience to be good againſt this Diſeaſe, wherefore let ſtore of them be often eaten, as a Sallet. Moreover let three or four of them being cut into ſlices be infus'd and cloſe ſtopt in three Pounds of fountain water all Night; to the clear Liquour pour'd off, add of Sal Prunella two or three Drams; the Doſe is half a Pound thrice or oftener in a Day; for the ſame purpoſe

poſe alſo Decoctions of the Leaves together with the Fruit made in fountain water are proper.

Some Mineral Purging waters, as eſpecially thoſe of *Northhal*, being reſolv'd by Evaporation manifeſtly ſhew the Nitrous Salt wherewith they are imbued: And I have ſometimes found by experience that dayly drinking about two quarts of them for many Days Cures a ſmall running Scab.

2. But as I have hinted before, *Mineral waters endow'd with a Vitriolick Salt*, as thoſe of the *Spaw*, and ours of *Tunbridge* and *Aſtrope* far exceed thoſe *Nitrous waters*, nay and all other Medicines, and are of greater efficacy in the Cure of the running Scab.

To thoſe who have not the conveniency of uſing theſe waters, I ordinarily give with good ſucceſs againſt this Diſeaſe common waters impregnated with our Steel, and ſo moſt exactly reſembling thoſe Mineral waters. It happens that *Tin and Antimony* by reaſon of their Mineral Salts, or at leaſtwiſe by reaſon of the Mercurial Particles in them are extol'd by many for Curing the running Scab, and are wont to be preſcrib'd with other Medicines. Let *Shavings of Tin*, and *Powder of Antimony* be infus'd in Beer for ordinary Drink; they enter alſo the Decoctions of *Sarza* with Woods which are ordered againſt this affect.

The uſe of the *Viper*, and preparations of it, ſufficiently recommend the excellent Vertue of *Volatile Salt* for the Cure of the deep ſort of running Scab, nay of the Leaproſie it ſelf: For it being manifeſt by frequent obſervations that Remedies prepar'd of Vipers do good in the running Scab, and Leaproſie, certainly the reaſon of the help it affords ought to be aſcrib'd to the *Volatile Salt*, with a great plenty of which this Animal is endowed: For the Particles of this deſtroy the fixt and acid Salts predominating in the Blood of the Diſeas'd, and diſſolve their Combinations; Nevertheleſs the *Salt*, *Spirit*, *and Oyl of Vipers* Chymically extracted, by reaſon of their Empyreumatick, and mighty Elaſtick Particles, which they draw from the Fire, are not proper in this Diſeaſe; ſo neither the *Spirit, or Volatile Salt of Harts-horn*, *Soot*, or *Blood*, and other ſuch like *Armoniacks*, becauſe by exagitating the Blood and Humours above meaſure, they cauſe their *Craſis* to be more diſſolv'd, and their Corruptions to be driven forth more plentifully to the Skin: Wherefore the more ſimple *preparations of Vipers*, as *Broaths* of their Fleſh boil'd in water, *Drinks* impregnated with Infuſions, or Incoctions of the ſame, and *Powders* made of the ſame dryed and beaten are preſcrib'd with more ſucceſs againſt this Diſeaſe: Moreover not only the Fleſh of

Vipers, but of other kinds of *Oviaprous Snakes* being boil'd and eaten for ordinary Food, give often great relief.

The running Scab, or ſcaly breakings forth of Puſhes, and growing in figures like cluſterings is ſo frequent and familiar a Symptom of an inveterate *French-pox*, that the firſt thing we do is to ask perſons affected with the former Diſtemper, whether they do not conceive that there may be ſomething of the Malignity of the other lying hid within them; and if it be found to be ſo, preſently all Specificks againſt the former and *Antiſcorbuticks* being laid aſide, we forthwith betake our ſelves to Decoctions of Woods, and thoſe doing little or no good, to Mercurial Medicines. And truly by this Method I have ſoon and eaſily Cur'd many perſons accounted to have a running Scab, and Leaproſie, who had been long under Cure, and miſerably tormented with Remedies appropriated to theſe Diſeaſes: And we refer this kind of running Scab to the Pathology of the French-pox, whereof it is an Appendix.

The *Second Indication* which is *Curatory*, having regard to the Diſeaſe it ſelf, and its primary Symptom, *viz.* the ſcaly breakings forth, and the cluſters of Puſhes, preſcribes *Topical Remedies* to be apply'd to the Skin outwardly for removing theſe effects: For which purpoſe *Baths* and *Liniments* are peculiarly proper; though they ſeldom, or never Cure of themſelves, unleſs the Procatarctick cauſe, *viz.* the Tartarous Diſpoſition of the Blood be firſt clear'd.

There is a mighty ſtore of theſe *Topicks* to be found as well among Phyſical Authors, as among Empiricks and Quacks: Though among them all, *Baths* or *Liniments made of Tar* far exceed all the reſt of the Remedies of both kinds: So that in truth we ſhould make uſe of theſe alone were it not for their ill ſmell: wherefore I ſhall give you certain *Forms* of Compoſitions with *Tar*, and without it:

Therefore for *Baths* it's a common thing to uſe water kept ſome time in Veſſels in which *Tar* has been before, and ſo impregnated by Infuſion. (Or)

Take two Pounds of Tar, and incorporate it into a pretty thick Maſs with white and ſifted Aſhes, which boil in a ſufficient quantity of fountain water, adding Leaves of ground Ivy, Fumitory, white Horehound, Roots of ſharp pointed Dock, and of Elecampane, of each four handfuls: Make a Bath to be us'd with governance; or let ſuch a Decoction be prepar'd without Tar for perſons troubled with the running Scab, and loathing the ſmell of Tar.

Sulphurous Baths, both *Natural* and *Artificial*, are found by frequent experience not to agree, nay and the former commonly to do hurt: Moreover all Bathing whatſoever ought to be us'd with great

great caution; for in regard this Adminiſtration exagitates and heats the Blood, it endangers to diſſolve its Craſis more (as is ſaid before) and to diſperſe its corrupted Taints in a more plentiful manner to the Skin.

2. *Liniments*, whoſe uſe is more ſafe, and proper, are of three kinds, or degrees, *viz.* gentle, mean, and ſtrong: I ſhall give you an example or two of each of theſe.

1. Firſt, therefore in *a ſmall running Scab*, where the breakings forth and cluſters of Puſhes are few and very ſmall, *faſting Spittle* is recommended: Alſo the *Liquour diſtilling from green Wood* in the Fire: So likewiſe a meer rubbing with the *Root of ſharp pointed Dock bruis'd, and macerated in Vinegar.* (*Or*)

Take Oyl of Tartar per Deliquium, Oyl of Nuts, or of bitter Almonds by expreſſion, of each equal parts, make a Liniment to be apply'd to the places affected twice a Day.

2. Liniments of the Second kind have *Tar* for an Ingredient which is eſteem'd as good as all the reſt.

Take Unguentum Roſatum ſix Ounces, Tar two Ounces, being melted together let them be mixt. (*Or*)

Take a good fat piece of Weathers Mutton, ſtick it with bits of the Roots of ſharp pointed Dock, ſpit it, and roaſt it: And baſte it with Tar, letting it drop leaſurely on it, keep the Dripping as a moſt excellent Ointment for the running Scab.

3. The ſtrongeſt Ointments againſt this affect are Mercurial, which conſiſt either of running Mercury, or Præcipitate; let the Forms and Compoſition of the former be the ſame as is preſcrib'd before againſt the Itch. As to the other,

Take white Præcipitate three Drams, Unguentum Roſatum three Ounces: Mix them, to anoint the parts chiefly affected: The uſe of theſe in this Diſeaſe ought to be very much ſuſpected: For if haply a Salivation be rais'd, a mighty glut of Matter ſticking in the pores of the Skin will be put in motion, which if the whole, ruſhing too much together towards the *Ductus Salivales*, gathers in a body about the parts of the Throat, it will endanger Suffocation.

Some years ſince a Virgin of a noble Family, whoſe Temperament was hot, as having originally a ſharp and ſalt Blood, after having liv'd a very long time, almoſt from her Cradle ſomewhat toucht with a running Scab, about the time of her coming to ripeneſs of years began to be troubled with it in a more grievous manner: For cluſters of ſcaly Puſhes did not only every where overrun her Arms, and Thighs, and other parts of the Body out of ſight, but likewiſe made her Hands and Face ſo loathſome, that ſhe was aſham'd to go abroad and converſe with others of her quality: An infinite number of

the leſſer ſort of Remedies were given her without any ſucceſs: By the uſe of *hot Baths* ſhe ſeem'd to grow better at firſt, but in the end ſhe became worſe after them. The waters of *Aſtrope wells* which have perfectly Cur'd ſome perſons of a running Scab, did her little or no good; wherefore ſeeing all ordinary Methods would not do, I propos'd that ſhe ſhould try Salivation, as being a more powerful Remedy than all the reſt, and (as it's ſaid) the laſt: The Patient and her Parents readily conſenting to this advice, preſently her Body being duly prepar'd by Purging and Bleeding, I gave her (after our wonted manner) *Pills of the Solar Præcipitate* for two Days, and after the Intermiſſion of one, the Medicine being repeated the third time ſhe began to Salivate very well and freely, it continuing upon her for a Month without any ill Symptom: Nevertheleſs to keep it in its due Tenour, I took care that a *Mercurial Ointment* was now and then apply'd to the Joynts of the Limbs, ſometimes to theſe, and ſometimes to others: Before this courſe was ended all the breakings forth were vaniſht; Notwithſtanding which to perfect the Cure, and withal to extirpate the Mercury, ſhe ſpent another Month in Purging, Sweating under a Cradle, and in a Diet Drink of a Decoction of *Sarſa, China,* &c. at which time ſeeming to be perfectly Cur'd, ſhe continued ſo for about forty Days: But from thence forwards, though ſhe obſerv'd an exact Form of Diet, the ſame Diſeaſe began to ſpring forth afreſh, and encreaſing by degrees, riſe at length to an overgrown ſtate as before: I, being in ſome confuſion at this event, perſwaded her to hope an alteration for the better after the flowing of her Menſes, which, having not yet happen'd, was expected in a ſhort time: Nevertheleſs after long expectation, that Excretion at length hapning, and thenceforward continuing its conſtant courſe, brought no Cure or relief to that Diſeaſe, but rather made it worſe: Wherefore ſhe had recourſe again to Phyſick, and tryed ſundry ſorts of Remedies, almoſt of all kinds: Which proveing all of no effect, her Friends earneſtly deſir'd that ſhe ſhould enter again the courſe of Salivation, hoping that that Method which Cur'd her at firſt for a ſhort time, being us'd again, would Cure her at leaſt for a longer, or haply reſtore her to her perfect Health: Therefore according to their deſire the ſame courſe of Salivation and Sweating being repeated for the two Months ſpace, and thereby the Puſhes and Scaly breakings forth being every where vaniſht, the noble Virgin ſeem'd then again to have recovered her Health: But within ſix Weeks after the courſe was finiſht, the Puſhes, and their heaps, or cluſters appear again, and daily increaſing by degrees in number and

bulk,

bulk, at length rendred the Body all over in a more loathſome condition than before.

I knew another, a robuſt Man of an Athletick habit of Body, who after he had been troubled with a running Scab many years, the Diſeaſe at length growing worſe, and being riſen to an overgrown ſtate, had his whole Body covered over with a white, and as it were Leaprous Scurf: So that every Night the Scales falling off in a great plenty within the Bed like Bran, might be gathered up in heaps: This perſon, in order to his Cure, firſt tryed ordinary Remedies almoſt of all kinds, but without any good: And then having undergone a gentle Salivation of Mercury, he found himſelf nothing better; afterward that Method being repeated, after a long and high Flux, he ſeem'd reſtor'd to his Health: But within three Months the ſame Diſeaſe ſpringing forth afreſh, riſe in a ſhort time to its Ancient Enormous ſtate: Nay and having undergone this irkſome kind of Cure a third time, that affect ſeeming for a while to be driven away, return'd again, and thenceforward in deſpite of this, and any other Method whatſoever, exercis'd its Tyranny during the Life of the Patient: I need not ſay any thing of the Leaproſie, which being only a more intenſe degree of the former Diſeaſe, ſeems ſcarce to admit of any Cure.

THE

THE *LONDON PRACTICE* OF PHYSICK,

Contained in Dr. *WILLIS's* Tract OF CONVULSIVE DISEASES.

CHAP. II.

Inſtructions and Preſcripts for the Cure of the Falling-ſickneſs.

THE Epilepſy, or Falling-ſickneſs is thus deſcrib'd; Firſt, as to the Idæa of the Diſeaſe, a Fit of the Epilepſy ſeems to be an Univerſal, and only a more violent ſort of Convulſion; in which the Spirits that are in the Brain being firſt irregularly mov'd, and as it were in Confuſion; all the reſt reſiding in the Appendix both Medullary and Nervous of the Brain fall together into Convulſive motions;

motions, or diſorderly contractions, and continue them for ſome time, with frequent twitchings. The acceſs of the Diſeaſe for the moſt part is by way of ſurpriſe, ſo that the Diſeaſed fall ſuddenly on the ground, grind their Teeth, foam at Mouth, and often beat their Heads againſt the ground; their Arms, and Leggs in the mean time, nay and their Neck and Back either preſently become ſtiff, or are twiſted in and out with various Flexions; ſome violently beat their Breſt, others ſtretch forth their Arms and Leggs with great force, and impetuouſly throw them, and ſometimes the whole Body from one place to another: In many the Præcordia and Hypochondres, and all the lower Venter ſwell, and are greatly blown up: After ſome time, which is ſometimes ſhorter, and ſometimes longer, theſe Symptoms ceaſe on a ſudden, and then the Sick come to themſelves again, and recover their Senſes, there remaining nevertheleſs after the Fit a pain of the Head with a drowſineſs, and a deadneſs of the Senſes; and often a Vertigo and Scotoma. *Epileptical Fits* are wont to return ſometimes, at ſet times of the day, month or year, but for the moſt part they are wont to have a more certain return, and to ſeize more violently according to the greater changes of the year, or the conjunctions, or oppoſite aſpects of the Moon or Sun; ſometimes the acceſſes are erring and uncertain according to the occaſion and variety of evident cauſes: And the Fits are ſometimes more mild, ſoon paſſing away, ſo that the Diſeas'd ſcarce fall on the ground, or are depriv'd of Sence; ſometimes they are more violent, keeping the perſon Senſeleſs for many hours, and inducing other dreadful Symptoms. Sometimes, though ſeldom, certain Signs, forewarning a Fit, give notice to the Diſeas'd before hand, as a heavineſs of the Head, a flaſhing of the Eyes, a ringing in the Ears: Sometimes in ſome exteriour part, to wit, in the Arm, or Legg, or alſo in the Back, or Hypochondres, a Convulſion precedes, which, aſcending thence like a cold wind, and creeping towards the Head, ſeems to cauſe a Fit of the Falling-evil: Nor is it leſs uſual for it to have its beginning in the Stomack, Spleen, Womb, Inteſtines, Genitals, and other of the Viſcera, and to paſs thence to the Head in like manner.

It is to be obſerv'd that ſometimes the Epilepſy terminates of its own accord, *viz.* about the time of Puberty, ſo that thoſe who are not Cur'd before that period is paſt, *viz.* the twentyfifth year, ſcarce ever recover their Health: For about the time of Puberty a double alteration happens to humane Body, and therefore often a releaſe from the Epilepſy, or any other Diſeaſe more deeply rooted: For Firſt, at this time the Genital Humour begins to be gather'd together in the Spermatick Veſſels, whence

whence it follows that the Spirituous Particles, and the Nitro-ſulphureous which are wont to accompany them, and ſuch as are Morbifick, are not only depos'd in the Brain, but alſo in the Teſtes, wherefore if the Heterogeneous Combination of the Spirits, before taking to the Brain, and cauſing the Epilepſy, be freely carried into that new Store-houſe, the Brain alſo being more free, often ſhakes off the Epileptical, or otherwiſe Morbid Diſpoſition. Secondly, about the time of Puberty, as the Blood conveys ſomewhat, which before was deſign'd for the Brain, to the Genitals by the Spermatick Arteries, ſo alſo it receives ſome ferment from thoſe ſaid parts by way of return by the Veins, *viz.* ſome particles imbued with a Seminal Tincture are carried back into the Maſs of Blood, which ſtrengthen it, and inſpire into it a new and ſprightly Vigour, wherefore at that time the endowments of the Body and Mind chiefly exert themſelves, the Hairs ſhoot forth, the voice becomes more ſonorous: The Menſes flow from Women, and other Accidents ſupervene, by which it manifeſtly appears that the Blood and Nervous Juice are impregnated with ſome new Fermentation: Wherefore unleſs the Morbifick Ferments, or Seminal Roots are overcome by this new Natural Ferment, they continue afterwards unconquered to our dying Day: If the Epilepſy does not ceaſe about the time of Puberty, nor can be Cur'd by the uſe of Medicines, it either terminates immediately in Death, or is chang'd into ſome other Diſeaſe, *viz.* a Palſy, Stupidity, or Melancholy, for the moſt part incurable.

Concerning the Cure of the Falling-ſickneſs the Indications (as vulgarly ſet forth) are either Curatory, having regard to the Fit, and either keep it off as it is coming, or ſoon force it off when it has ſeiz'd: Or they are Prophylactick, and regard the cauſe of the Diſeaſe, which if they remove, its acceſſes will be kept off for the future.

As to the firſt intention, general Evacuatives have ſcarce place; nor ought a Vomit, or Purge, and very ſeldom Bleeding to be us'd in a Fit; if the perſon continues depriv'd of Senſe a long time, Clyſters are ſometimes wont to be adminiſtred; but the chief thing to be done is to fix the Animal Spirits, which are too Exorbitant and Volatile; and to ſuppreſs their beginning Exploſions: For which ends two kinds of Remedies chiefly conduce, *viz.* Firſt, Such as repreſs the Animal Spirits, apt to riſe to an Exorbitancy and to ſhoot, and repel them by a certain Fumigation as it were ungrateful to them; and force them into their due courſe: Which Medicines endow'd with a Volatile, and Armoniack Salt, or alſo with a Vitriolick Sulphur will effect. Of which kind are Salt and Oyl

of

of Amber, Spirit of Blood, of Harts-horn, of Soot, Tincture of Caſtoreum and the like: For theſe being inwardly taken, or held to the Noſtrils often give relief; nay and are thought to drive away the evil Spirits of this Diſeaſe, even as in *Tobit* the Fume of the Gall of a Fiſh burnt did the Devil. Secondly, the Animal Spirits are diverted, or hindred from entring upon Exploſions, when they are allur'd to, and kept imploy'd in ſome work that is uſual to them, wherefore in the Fit, Frictions us'd over the whole Body, and continued for ſome time often do good: But as to raiſing up perſons ſeiz'd, and wholly reſtraining the Arms and Leggs from the Convulſive motion, or binding them in this or that Poſture (as ſome people uſe to do) and ſo, as to blowing Sneezing-powder into their Noſtrils and pouring ſtrong Cordials into their Mouths, or applying Cupping-glaſſes and Scarifications, and dealing roughly with the Diſeas'd by other ways of Adminiſtration, thus diſturbing the courſe of the Fit: I ſay this ſort of practice is very often ill taken in hand, becauſe by this means Nature is doubly toil'd, *viz.* both by the Diſeaſe, and no leſs by ſtanders by, and Servants, whereas it were much better to let the Fit paſs according to its courſe, that ſo the Diſeas'd might eſcape with one affliction.

Truly the greateſt care of a Phyſician and efficacy of Remedies is in the Prophylactick part of this Diſeaſe, that its cauſe being taken away, or its root cut off, all the Fruit may wither: The Medicines requir'd for this Indication have regard to many intents, which nevertheleſs may be reduc't to theſe two chief heads, *viz.* Firſt, that the fuel of the Diſeaſe ſupplyed immediately from the vitious Blood and Nervous Juice, and more mediately from the Viſcera and firſt paſſages, be cut off; And then Secondly, that the evil Diſpoſition of the Brain, and Spirits in it, which is peculiar to the Epilepſy, be remov'd.

As to the firſt thing indicated, here Vomits, and Purges, and other both Evacuatives, and Alteratives, nay and Bleeding, and Cauteries have place; for as much as by theſe means and ways the Impurities both of the Viſcera and Humours are drawn away, and their Diſcraſy is corrected: For though theſe Medicines and Phyſical Adminiſtrations ſeldom or never Cure the Epilepſy alone, yet they remove Impediments, raiſe up Nature, and ſtir her up to ſet upon her Enemy: They alſo prepare the paſſages that thereby Specifick Remedies may more certainly and efficaciouſly exert their Vertues: Wherefore when the Cure of this Diſeaſe is attempted Spring and Fall, and at other fit ſeaſons, by Secrets and Arcana's, it's uſual to uſe betwixt whiles thoſe ſorts of Medicines.

As to Specifick Remedies which are affirm'd even alone, though not always, to reach the cauſe of the Epilepſy, and to overcome it, of which kind are the Male Peony, Miſtletow of the Oak, Rue, Caſtoreum, Elks-hoof, preparations of Mans Scull, Amber, Coral, with many others: In regard theſe things are taken without any ſenſible Evacuation, or even Diſturbance following in the Viſcera or Humours, it ſeems ſtrange by what formal way, or Vertue of working they are wont ever to do good in this Diſeaſe.

If there be any room for conjecture in this intricate and obſcure thing, in regard the Procatarctick cauſe of the Epilepſy conſiſts in the Heterogeneous Combination hapning to the Spirits in the Brain it follows that thoſe things which overcome, and remove ſuch a cauſe are of ſuch a Nature, that by ſtrengthening the Brain, and conſtringing its Pores they keep off that Combination, and ſo fix, and as it were conſtipate the Spirits that abound in the middle of the Brain, leaving their Combination, that they are no longer apt and prone to irregular Exploſions: After the like manner haply as when the Powder of Aurum Fulminans ground with Sulphur, and ſprinkled with Spirit of Vitriol loſes its fulminating Vertue: And in truth we may conjecture nay in ſome meaſure diſcover that theſe kinds of properties, to wit, one, or both of them together, are in many Antiepileptick Remedies; for the Peony, Miſtletow, of the Oak, Rue, Lillies of the valley, with many others excel in a manifeſt ſort of Aſtriction, whence it is very likely that their Particles inwardly taken, and ſo, by the Vehicle of the Blood, or Nervous Juice, convey'd to the Brain, ſo conſtringe and cloſe its over Lax and Gaping Pores, that they no longer lie open for the entrance of the Morbifick matter: Moreover becauſe theſe concrets breath forth an Armoniack as it were, and diſſipating vapour, therefore the ſame are ſaid to purify the Animal Spirits, and to fix and corroborate them, having left their Heterogeneous Combination. This Vertue of purifying the Spirits, proceeding from the Armoniack Salt, ſhews it ſelf moſt in Remedies taken from Minerals and Animals, ſuch as are the preparations of Mans Scull, Blood, Amber and Coral; as the other Aſtringent Vertue appears moſt in the parts and preparations of Vegetables.

There is no need for us here to ſet forth a compleat Method of Curing the Epilepſy with exact Forms of Preſcripts, becauſe general Precepts and excellent Remedies are every where to be had amongſt Authors, and a prudent Phyſician will eaſily accommodate both the Indications, and that plentiful Apparatus of Phyſick to particular caſes of ſick perſons: But becauſe we

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give a clearly new Theory of this Diſeaſe, a Therapeutick Method alſo adapted to the ſame ought to be here given; Which we ſhall preſently fully delineate, after I have given you a ſtory of a perſon troubled with the Epilepſy.

The Daughter of an Alehouſe-keeper at *Oxford* had been very ſubject from her Infancy to a Catarrh falling on her Eyes, being otherwiſe ſtrong and ſound enough, ſhe liv'd alſo daily us'd to hard labour; about the fourteenth year of her Age ſhe began to be ſeiz'd with Fits of the Epilepſy, whereof ſhe underwent many, they chiefly following her according to the greater changes of the Moon: Being entreated to endeavour her recovery, I gave her a Vomit of the Solar Præcipitate, and advis'd her to repeat the ſame three Days before every new and full Moon, and likewiſe that every time, for four Days after the Vomit taken, ſhe ſhould take twice a Day *a Dram of Powder of the Roots of Male Peony, with a draught of black Cherry water:* By theſe Remedies the Fits intermitted ſo long that the Diſeaſe ſeem'd to be Cur'd. When afterward they return'd again, ſhe was again recovered by the uſe of the ſame Medicines: And then her Menſes hapning to flow, and keeping their due courſe, ſhe continued for the time to come free from that Diſeaſe.

The Therapeutick Method.

IN the Cure of the Epilepſy I judge we muſt begin by Purging, and if the Diſeas'd eaſily bears Vomiting, let him take a Vomit in the firſt place, and let it be repeated for many Months four Days before the full Moon: To Infants and Children let *Wine of Squills mixt with freſh Oyl of ſweet Almonds be given, or alſo Salt of Vitriol from half a Scruple to a Scruple:* To Adult perſons and ſuch as are of a robuſt Conſtitution let the folowing Forms of Medicines be preſcrib'd.

Vomits.

TAke Crocus Metallorum, or Mercurius Vitæ from four Grains to ſix; Mercurius Dulcis from ſixteen Grains to a Scruple, let them be ground together on a Marble, mix it with the Pap of a boil'd Apple, or with a Dram of Conſerve of Borrage, make a Bolus. Or give from half an Ounce to an Ounce and a half of the Infuſion

of Crocus Metallorum, or Mercurius Vitæ made in Sack. Or take Mynſicht's Emetick Tartar from four Grains to ſix: Thoſe that are of a more tender Conſtitution may take Salt of Vitriol from a Scruple to half a Dram, and after half an hour let them drink upon it many pints of Ale-Poſſet-drink, then a Quill, or the Finger being put into the Throat, let Vomiting be provok't, and let it be ſometimes repeated.

The Day after the Vomit, unleſs ſomewhat indicates the contrary, let Blood be taken from the Arm, or from the Hæmorrhoid Veins by Leeches: Then the next Day after let a Purging Medicine be taken, and let this afterwards conſtantly be repeated four Days before the new Moon.

Purges.

TAke Roſin of Jalap half a Scruple, Mercurius Dulcis a Scruple, Caſtoreum three Grains, Conſerve of Peony-flowers a Dram; make a Bolus. Take the greater Pilulæ Fætidæ two Scruples, Roſin of Jalap five Grains, Ammoniacum diſſolv'd in Aqua Hyſterica what ſuffices; make five Pills. Take Threads of black Hellebore macerated in Vinegar, dried, and powdred half a Dram, Ginger half a Scruple, Salt of Wormwood twelve Grains, Oyl of Amber two Drops make a Powder, give it in the Pap of a boil'd Apple. Take Compound Powder of Hermodacts a Dram, Mans Scull prepar'd ſix Grains, make a Powder, give it in a draught of the Decoction of Hyſſop or Sage.

In the Days in which he does not Purge, eſpecially about the times of the Moons changes, let Specifick Remedies be given Morning and Evening, which are ſaid to Cure this Diſeaſe by a certain Secret and innate Vertue: There is an immenſe number of theſe, and they are preſcrib'd according to various Forms of Compoſitions.

Specifick.

THE moſt ſimple Medicines, and which experience has prov'd to be very efficacious, are the Roots of the Male Peony and its Seed: *Take Roots of the Male Peony dryed and powdred from a Dram to two or three Drams, let it be given twice a Day in the following Tincture. Take Leaves of Miſtletow of the Oak two Drams, Peony Roots ſlic't half an Ounce, Caſtoreum a Dram, let them*

them be put in a cloſe Veſſel with Betony water, or ſimple Peony water, and White-wine of each a Pound, Salt of Miſtletow of the Oak, or of common Miſtletow two Drams, let them digeſt in a cloſe Veſſel by a Sand heat for two Days; let him take three Ounces with a Doſe of the Powder before preſcrib'd.

Let poor people take the ſaid Powder in a Decoction of Hyſſop or Caſtoreum made in fountain water, or White-wine.

At the ſame time let the Root of Peony, cut in ſlices, and run through with a Thread, be hung about the Neck: Let the Roots alſo fryed in a Frying-pan, or boil'd till they are tender, be daily taken with his Food.

Take Roots, and Seeds of the Male Peony of each two Drams, Miſtletow of the Oak, Elks-hoof of each a Dram; being ſlic't and bruis'd, let them be ſown up in very fine Linnen, make a Bag to be worn on the Pit of the Stomack.

Amongſt Specificks this Powder is greatly commended by ſome Authors. *Take Caſtoreum, Opoponax, Sanguis Draconis, Antimony, Peony Seeds, of each a like quantity: Make a Powder, let it be taken from half a Dram to a Dram every Morning with Wine, or an appropriated Decoction, or with black Cherry water.*

Take Mans Scull prepar'd an Ounce, Miſtletow of the Oak, factitious Cinnaber, Elks-hoof, of each half an Ounce; mix them, the Doſe is from half a Scruple to a Scruple.

If the Form of a Powder be ungrateful to any Perſon, or if it's long continued uſe makes it loathſome, Electuaries, Pills, Troches Spirits, and Elixirs, each of them conſiſting of Specifick Medicines, are wont to be preſcrib'd.

Electuaries.

TAke Conſerve of Male Peony-flowers, of Lillies of the valley, of each three Ounces: Seeds and Roots of the Male Peony powdred of each two Drams, Coral prepar'd a Dram, Pearl powdred, Mans Scull prepar'd, of each two Scruples, Salt of Miſtletow of the Oak a Dram and a half, with a ſufficient quantity of Syrup of Coral, make an Electuary; let him take Morning and Evening the quantity of a Nutmeg.

Take Roots of Male Peony powdred an Ounce, Seeds of the ſame half an Ounce, Miſtletow of the Oak, Elks-hoof, Mans Scull prepar'd, of each two Drams, Roots of Angelica, Contrayerva, Virginia Serpentary, of each a Dram, white Amber, Coral calcin'd, of each a Dram, Salt of common Miſtletow two Drams, Sugar-candy diſſolv'd in a ſuf-

ſufficient quantity of the Antiepileptick water of Langius eight Ounces, make a Confection, let him take twice a Day the quantity of a Nutmeg.

Pills.

LET thoſe Powders, Salt of Amber, and of Harts-horn, being added to them, be made into a Maſs for Pills with a ſufficient quantity of Balſamum Capivii whereof let three or four Pills be taken in the Morning and Evening, drinking after it a draught of an appropriated Liquour.

Or let an Elixir of this kind be prepar'd, whereof let eight or ten drops be taken twice a Day in a ſpoonful of an appropriated Julape, drinking after it a little of the ſame.

Elixirs.

TAke Hungarian Vitriol ſix Pounds, let it be diſtill'd in a Glaſs Retort by a Sand heat for twentyfour hours; then let the ſame Retort luted with a large receiver be put in a Reverberatory Furnace, that the Acid Spirits may be forc't ſo long by a ſtrong Fire till they go forth: Let the whole Liquour diſtill'd be drawn off in a leſs Glaſs Retort by a Sand heat; and in a Matraſs let there be pour'd to it Roots of Male Peony cut in ſlices and dry'd four Ounces, Seeds of the ſame an Ounce, Mans Scull prepar'd, Elks-hoof, red Coral of each half an Ounce, Miſtletow of the Oak two Drams, let it digeſt with a gentle heat for many Days till the Tincture be extracted; let the Liquour being decanted, ie drawn off in a Glaſs retort till only a third part of it remains, let that which is diſtill'd be kept apart by it ſelf: To the remainder pour a like quantity of Spirit of Wine highly rectified, and impregnated with the Infuſion of the ſame Ingredients, and let them digeſt for ſix Days in Horſe-dung: Make an Elixir, whoſe Doſe is from half a Scruple to a Scruple. Let the diſtill'd Liquour be given from half a ſpoonful to a whole one for the ſame intentions.

Or let an Oyl be prepar'd of Salt of Venus according to the preſcript of Henricus ab Heers, and let it be given as before.

Empirical

Empirical Remedies.

AMongſt Specifick Remedies, which (in caſe thoſe before do no good) may alſo be try'd, we may account the Liver of Froggs, the Bladder of a Boar, dryed with the Urine, the Powder of Briony Roots, the Powders of a Cuckow, or of Crows; the Rennet and Lungs of a Hare, the Liver of a Wolf, Stones taken out of Swallows, the Liver of a Kite, Crows Eggs daily to be taken amongſt your Food and Medicines, with many other things, a famous Catalogue of which you may find in *Henricus a Bra* a Phyſician of *Zutphen*; and out of which preſcripts for the poor may be taken, as being eaſy to be had, and of a ſmall price.

Whilſt theſe kinds of Medicines are inwardly taken according to the foreſaid Method, ſome Adminiſtrations outwardly apply'd contribute help, and are juſtly taken in as a part of the Cure. Wherefore always in this Diſeaſe let Iſſues, to wit, one or two be made in fit places, alſo let Veſicatories be often apply'd.

Periapts hung about the Neck, or worn on the Pit of the Stomack are judg'd to be of uſe. Let freſh Peony Roots cut into bits and run through with a Thread be made into Bracelets, to be worn all round the Neck: Aſſoon as they are withered, let new ones be put in their place, and let thoſe be made into Powder to be taken inwardly. *Take Roots and Seeds of Peony of each two Drams, Elks-hoof, Mans Scull prepar'd of each a Dram, Miſtletow of the Oak half a Dram, being groſly powdred, let them be ſewen in red Silk, and make a Bag to be hung about the Neck.*

An Amulet of a young Shoat of Elder found growing on a Willow is greatly commended.

Plaiſters.

IT is proper for ſome to have their Hair ſhav'd off, and to have a Plaiſter applyed to the Sinciput: *Take Roots and Seeds of Peony, Caſtoreum, Miſtletow of the Oak, Mans Scull very finely powdred, of each a Dram, Betony Plaiſter two Ounces, Caranna, Tacamahacca of each two Drams, Balſamum Capivi what ſuffices; make a Maſs, ſpread it on Leather, make a Plaiſter for the Sutures of the Head.*

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Let the Temples and Noſtrils often be anointed with Oyl of Amber by it ſelf, or mixt with *Oleum Capivii.*

Let Sneezing Powders and Apophlegmatiſms be conſtantly us'd Mornings. *Take white Hellebore a Dram; Caſtoreum, Euphorbum of each half a Dram; ſweet Marjoram, Leaves of Rue, of each two Drams; make a Powder. Let a Decoction of Hyſſop or Sage, with the Confection of Muſtard-ſeed diſſolv'd in it, be gargal'd in the Mouth and Throat.*

Let Glyſters ſometimes be given according as need requires.

In regard Solid Medicines ought ſometimes to be diluted with Liquids, or theſe to be drank after thoſe, let diſtill'd waters, Julapes, Decoctions, or Tinctures that are endowed with ſome Specifick Vertue againſt this Diſeaſe be in a readineſs for this purpoſe.

Take Hungarian Vitriol four Pounds, freſh Mans Scull powdred four Ounces, Peony Roots ſlic't ſix Ounces; being bruis'd together in a Mortar pour to them of Sack, or ſmall White-wine, or Wine of the Juice of black Cherries fermented in a Veſſel two Pounds, let them be diſtill'd in a Glaſs Retort by a Sand heat.

Take Raſpings of Box, Hungarian Vitriol of each two Pounds, Leaves of Miſtletow three handfuls, Leaves of Rue two handfuls, being bruis'd together pour to them of Sack four Pounds, let them be diſtill'd in a Gourd-glaſs by a Sand heat.

Take common Vitriol ſix Pounds, Roots of Male Peony ſix Ounces, Miſtletow of the Oak an Ounce, green Walnuts eight Ounces; being ſlic't and bruis'd let them diſtill in a Glazed Pot with a Glaſs Alembick ſet over it by a Sand heat: Take of this Liquour a Pound, water of black Cherries and of Lime-tree Flowers, of each half a Pound, double refin'd Sugar four Ounces, mix them, make a Julape: The Doſe is two or three Ounces twice or thrice a Day.

Oxymel of Squils, alſo Hydromel with Hyſſop boil'd in it, are very much commended by the Ancients: Or let this kind of Apozeme be prepar'd, whereof you may give from four Ounces to ſix or eight twice a Day.

Take Roots of Male Peony, Angelica, Maſter-wort, Valerian, of each ſix Drams, Leaves of Betony, Sage, Lillies of the valley, Penny-royal of each a handful, Seeds of Rue, Gith of each three Drams, of Peony half an Ounce, Raiſins three Ounces, Licorice half an Ounce, being ſlic't and bruis'd let them boil in ſix Pounds of Fountain water to a conſumption of the third part. Towards the end add Wine of black Cherries half a Pound, or ten Ounces; ſtrain it and let it be kept in Veſſels cloſe ſtopt; the Doſe is from ſix Ounces to eight twice a Day after the Remedies above preſcrib'd.

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Or let the foreſaid Ingredients, the Licorice and Raiſins excepted, be boil'd in ſix Pounds of Hydromel to a conſumption of the third part, the Doſe is from four Ounces to ſix.

But if the foreſaid Method, conſiſting in the uſe of Catharticks and Specificks being tryed for ſome time, proves wholly without effect, we muſt come to Remedies of another kind, and eſpecially to thoſe which are call'd great: In this rank we place Diaphoreticks, Salivation, hot Baths, and Mineral waters.

Alphonſus Ferrius ſays he has Cur'd a great many Epileptical perſons, by a ſimple Decoction of Guaiacum, being preſcrib'd twice a Day from ſix Ounces to eight, and a ſecond Decoction of it being taken inſtead of ordinary Drink, as is uſual in the French-pox. If to ſuch a Decoction the Roots of Peony and other Specificks be added, haply it will be more efficacious. It ſeems probable that a Salivation powerfully rais'd by Mercury, and afterwards followed by a Sweating Diet Drink, will infallibly Cure this Diſeaſe: What hot Baths or Mineral waters will do, is not yet known to me either from my own experience or that of others; I ſhall try haply ſome time what our artificial Mineral waters, *viz.* impregnated both with Iron, and Antimony being taken for many Days in a great quantity will be able to effect towards the Cure of the Falling-ſickneſs.

CHAP. II.

Instructions and Prescripts for Curing the other kinds of Convulsions, and in the first place of the Convulsive motions of Children.

IT happens that Infants and Children are so generally, and frequently troubled with Convulsive affects, that this may be accounted as the chief and almost only kind of Convulsions; for those kinds of Symptoms in Adult persons are denoted by other Names, and are wont to be refer'd to the Epilepsy; Hysterick, Hypochondriack, or Colick passions, or also to the Scurvy; but in Children, as it were by way of excellency, they are call'd Convulsive motions.

Concerning these we may observe, that Children are found to be very subject to Convulsions chiefly at two times, *viz.* within the first Month after they are Born, and about the time of the eruption of Teeth: Though Fits of this Disease happen also often at other times, and for certain other causes.

For, in those in whom the Seeds of a Convulsive Disposition are rooted, these Seeds sometimes display themselves, and come to a Morbid Matureness either presently after the persons are Born, (as is said before) or lying hid for a while, sometimes precede in them the Eruption of Teeth, sometimes follow it at a great distance of time after, and at length in an uncertain course break forth in act for other evident causes, *viz.* either inward or outward, such as are an unhealthy or pregnant Nurse, Milk coagulating in the Ventricle, or degenerating into an acid or bitter Corruption, a Feverish Distemper of the Head, and Ulcers of other parts, breakings forth suddenly disappearing, changes of the Air, Conjunctions or Opposite Aspects of the Sun and Moon, and the like.

These Convulsions in Children are wont to infest three Regions of the Body, *viz.* the parts of the Head and Face; the Members and outward Limbs; and the Præcordia and Viscera: And we observe that sometimes these, sometimes the others, sometimes two of them, or all the Regions together are troubled with the Morbifick cause, according as the same is fixt either about the Origines, or extremities of the Nerves. And when the first of these happens, according as the superiour, middle,

or

or lower ſpinal part of the *Medulla Oblongata*, to wit, one of them alone, or more of them together are ſet upon by the Morbifick cauſe.

In Children obnoxious to Convulſions hereditarily, the Convulſive Fits are excellently provided againſt, if preſently after a Child is Born an Iſſue be made in the Nucha, and Blood be drawn from the Jugular Veins by Leeches, for by the former the Corruptions of the Nervous Juice are convey'd away, and by the latter the impure Efflorescencies of the Blood are withdrawn from the Head: A perſon whoſe Children dyed all of Convulſions within three Months time, at length to prevent the like fatal Accident in a Child freſh Born, ſought for Remedies: Being call'd after ſome Days after the Birth, I adviſ'd that in the firſt place an Iſſue ſhould be made in the Nucha, and then the next Day after, that a Leech being apply'd to the Jugular of both ſides, Blood ſhould be drawn to the quantity of two Ounces: moreover that near each of the Conjunctions and Oppoſite Aſpects of the Sun and Moon about five Grains of the following Powder ſhould be given in a ſpoonful of Julape for three Days, Mornings and Evenings.

Take Mans Scull prepar'd, Roots of Male Peony of each a Dram, Pearl powdred half a Dram, double refin'd Sugar a Dram, mix them, make a ſubtile Powder.

Take black Cherry water three Ounces, Langius's Antiepileptical water an Ounce, Syrup of the Flowers of Male Peony ſix Drams, mix them.

I ordered alſo that the Nurſe at the ſame Phyſical hours ſhould take a draught of Whey, in which Seeds and Roots of the Male Peony, and Leaves of the Lilly of the valley were boil'd: The Infant continued well for about four Months, but then began to be troubled with Convulſive affects: At which time the ſame Remedies were given in a greater Doſe both to the Infant, and to the Nurſe. Veſicatories were alſo applyed behind his Ears, and Blood was drawn by Leeches from both Jugular Veins; and within two or three Days the Child grew well: afterward when within four or five Months the Convulſions return'd at times, ſtill by the uſe of the ſame Remedies he was Cur'd: After a year and a half the Convulſive affects wholly ceaſt, but about the lower part of the Backbone a Tumour without Pain grew up, whence ſome Crookedneſs of the Vertebræ, and a weakneſs of the Leggs, and at length a Palſy were caus'd. It ſeems in this caſe that the Convulſive matter which was wont to aſſail the Origines of the Nerves, at length entering the Spinal Marrow, and being thrown down into its lower part, wholly ſtopt the Mouths

of the Arteries belonging to it; to wit, because to the explosive Particles, other narcotick and grosser Particles had joyn'd themselves.

The Therapeutick Method against Convulsive affects in Children.

IN Infants and Children we must take care either to prevent imminent Convulsions, or being already begun to Cure them.

For if former Children Born of the same Parent have been found obnoxious to Convulsions, that evil ought to be prevented in the rest of the Children Born afterward by a seasonable use of Remedies: For this end it is usual to pour into the Mouth of an Infant newly Born, assoon as it begins to Breath, some Anticonvulsive Medicine: Hence some are wont to give it some drops of most pure Honey, others a spoonful of Canary sweetn'd with Sugar, and others Oyl of sweet Almonds fresh drawn: By some persons a drop of Oyl of Amber, or half a spoonful of Epileptical water is put into its Mouth.

Besides these first things given Children, which truly seem to be of some moment; certain other remedies and ways of Administration ought to be us'd; *viz.* let a spoonful of a Liquour appropriated to this affect be drank twice a Day. For Example;

Take water of black Cherries and of Rue of each an Ounce and a half, the Antiepileptick water of Langius an Ounce, Syrup of Corral six Drams, Pearl prepar'd fifteen Grains, mix them in a Glass.

On the third or fourth Day after it is Born, let an Issue be made in the Nucha, then if it has a Florid Countenance, let a little Blood to an Ounce and a half, or two Ounces, be drawn from the Jugular Veins by Leeches, care being taken lest he Bleed too much when he Sleeps: Let the Temples and Neck be gently rub'd with such a Liniment.

Take Oyl of Nutmeggs by expression two Drams, Oleum Capivii three Drams, Oyl of Amber a Scruple; let a Periapt of the Roots and Seeds of the greater Peony with a little addition of Elks-hoof be hung about the Neck.

Moreover let Anticonvulsive Medicines be daily given the Nurse: Let her take Morning and Evening a draught of Whey in which the Roots and Seeds of Male Peony, and the Seeds of sweet Fennel are boil'd.

Take Conserve of the Flowers of Betony, Male Peony, and Rosemary

of

of each two Ounes, Powder of the Roots and Flowers of the Male Peony of each two Drams, red Coral prepar'd, white Amber of each a Dram, Roots of Angelica, Zedoary prepar'd of each half a Dram, with a sufficient quantity of Syrup of Peony, make an Electuary: Let her take the quantity of a Nutmegg Morning and Evening.

Take Powder of the Roots of Male Peony two Drams, Seeds of the same a Dram, make a Powder; double refin'd Sugar dissolv'd in the water of Lime-tree Flowers, and boil'd to a consistency for Tablets three Ounces, Oyl of Amber a Scruple: Let Tablets be made according to Art, each Weighing half a Dram, let her eat one every sixth hour, and let her keep an exact Form of Diet.

In case any Infant be actually affected with Convulsions, because an Issue works but little and slowly, it is proper to apply a Vesicatory to the Nucha, and behind each Ear, and unless a cold Temperament forbids it, let Blood be drawn from the Jugular Veins by Leeches: Let Liniments be applyed about the Temples, Nostrils, and Neck, and Plaisters to the Soles of the Feet: Let Clysters be daily injected, which plentifully empty the Belly: Moreover Let Specifick Remedies be taken inwardly often in a Day, to wit, every sixth or eighth hour.

Take Oleum Capivii, and Oyl of Castoreum of each two Drams, Oyl of Amber half a Dram, make a Liniment.

Take of the Emplaster Oxycroceum two parts, Galbanum dissolv'd one part, Oyl of Amber a Scruple, make a Plaister for the Soles of the Feet: Let the Powder of Gutteta according to the description of Riverius be given twice or four times a day.

Take Mans Scull prepar'd, Peony-seeds, Elks-hoof, Pearl prepar'd, of each half a Dram, Amber-greice six Grains, make a Powder, the Dose is six Grains in a Spoonful of the Liquour beneath, written three or four times a day.

(Or) Take Mans Scull prepar'd, Pearl, of each half a Dram, Salt of Amber a Scruple, Sugar of Pearl a Dram, the Dose is half a Scruple.

(Or) Take Spirit of Harts-horn three Drops, let it be given every sixth or eight hour in a Spoonful of the Julape beneath prescrib'd.

To poor peoples Children let Powder of the Root of wild Valerian be given from half a Scruple to a Scruple; let it be given twice a day in a Spoonful of Milk, or of an Appropriated Liquour.

Untzerus greatly commends the Gall of a Sucking Whelp, *viz.* that all the Juice of the Gall-bladder be taken forth and given to the Child with a little Water of Lime-tree-flowers.

A Learned Physitian lately told me that he had known many Cur'd with this Remedy: Moreover Empiricks, after the Gall is drank

drank, are wont also to give to greater Children to eat the Liver roasted.

Julapes, distill'd Waters, and other Appropriated Liquours may be prepar'd according to the Forms following.

Take black Cherry-water three Ounces, Antiepileptical-water of Langius an Ounce, Sugar of Pearl two Drams, mix them.

Take fresh Roots of Male Peony cut into slices six Ounces, Hungarian Vitriol eight Ounces, Mans Scull two Ounces, Antiepileptical Water of Langius half a Pound; mix them, and let them distill in a Glass Retort by a Sand heat: The Dose is from a Spoonful to two Spoonfuls.

Take fresh Roots of Male Peony slic'd four Ounces, being bruis'd in a Marble Mortar, pour to them of Spanish Wine a Pound; express it strongly, add Manus Christi perlated half an Ounce, let it be kept in a Glass close stopt; the Dose is a Spoonful or two, twice a day.

When Convulsions happen by reason of a difficult breeding of Teeth, this Symptome is look't upon as secondary, and not dangerous, and therefore in the Method of Cure it is not always the first or chief thing which requires help, but sometimes we are rather sollicitous of appeasing the pain, and removing the feverish Distemper, wherefore both the Patient and Nurse ought to use a thin and cooling Diet; when the Teeth are upon eruption, let the passage be made open for them, either by a rubbing, or Section of the Gums: And also let Anodines be applyed to those parts when swollen and full of pain: Clysters and Bleeding often have place here: We must procure sleep, and allay the fervour of the Blood: Mean while let Anticonvulsive Remedies be us'd, but of the more moderate kind, and such as little trouble the Blood and Humours; Vesicatories, in regard they evacuate the Serum, which is too apt to be discharg'd on the Head, often give relief.

When Children are troubled with Convulsions, and that neither presently upon their Birth, nor by reason of an Eruption of Teeth, but through other occasions, and accidents, the cause of such an affect for the most part lyes either in the head, or somewhere about the Viscera of Concoction. When there is a suspicion of the former, as it is wont to appear by signs which shew that a Mass of Serous Filth is gathered together within the head; the above-cited Remedies ought to be given in a little larger Dose; moreover in those who bear Purging well, sometimes a Vomit, and a gentle Purge may be order'd them: Wine and Oxymel of Squills, also Mercurius Dulcis, Rhubarb, and Rosin of Jalap are of excellent use.

As often as the cause of the Convulsive Affect appears to be in the

the Bowels, either Worms, or sharp Humours causing Gripes in the Belly are found to be in the fault.

Against Worms a Purge of Rhubarb, of of Mercurius Dulcis, with the addition of Rosin of Jalap is ordered.

Formerly to a Child miserably troubled with Convulsions, so that he seem'd even a Dying, I gave a Dose of Mercurius Dulcis with Rosin of Jalap: With his Stools, whereof he had four, he voided twelve Worms, and presently grew well.

Take Roots of Virginia Serpentary powdred a Dram, Coral calcin'd to a whiteness half a Dram, make a Powder, the Dose is from half a Scruple to a Scruple twice a day for three days one after the other, drinking after it a Decoction of Grass Roots. Take Species of Hiera a Dram and a half, Venice-treacle two Drams, make a Plaister for the Belly, or let a Plaister of Galbanum be applyed to the Navel.

If the Convulsive motions are thought to proceed from the Irritation of the Ventricle, and the Intestines, caus'd by sharp Humours, a gentle Purge, either by Vomit or Seige, or of both, the one after the other, ought to be ordered. For this purpose let gentle Emeticks of Wine of Squills, or of Salt of Vitriol be taken; to wit, if at any time the Diseas'd be of their own accord seis'd with a straining to Vomit; but if the Evacuation seems rather fit to be attempted downwards, an Infusion of Rhubarb, or its Powder, Syrup of Cichory with Rhubarb, or of Roses with Agarick ought to be given: And I have often seen a Convulsive affect in Children Cur'd by these Remedies when seasonably administred; moreover Clysters in this case are of frequent use: But withal let not outward Medicaments be omitted, *viz.* Fomentations, Liniments, and Plaisters to be applyed to the Belly.

Take Camomil Leaves small slic't two handfuls, let them be put into two bags made of fine Linnen or Silk, which being dipt into warm Milk, and wrung forth must be applyed successively to the Belly. Take Tops or Flowers of Mallows slic't, boil them in fresh Butter, or Hogs Lard, and let them be applyed to the Belly in the form of an Ointment or Cataplasm.

CHAP.

CHAP. III.

Instructions and Prescripts for Curing Convulsive Diseases in Adult Persons, happning by reason of the Origine of the Nerves being chiefly affected.

THough Convulsive affects which happen to Adult Persons, being denoted by other Names, are also vulgarly accounted to have another Origine, and are wont to be refer'd to those they call Hysterical, Hypochondriacal, or Colick passions, or to the Scurvy; nevertheless if the thing be a little more attentively considered, it will easily appear, that certain Convulsive Symptoms frequently happen both to Men and Women, which properly and duly claim the name of a Convulsion: Now these may be variously distinguisht according to the Manifold seat of the Morbifick cause, but especially into these three kinds, *viz.* into certain Convulsions caus'd by reason of the Origine of the Nerves being chiefly affected, and into others which are caus'd by reason of the extremities of the Nerves being stopt with a Morbifick Matter; and lastly into others whose Morbifick Matter descending from the Head, gets possession of the whole, or the greatest part of the Ductus's of some peculiar Nerves, or of them altogether. We shall treat of each of these kinds of Convulsions one after the other.

Therefore first of all as to Convulsions happning by reason of the Origine of the Nerves being affected, we must note first that the Morbifick Matter besetting the Origines of the Nerves, sometimes passes chiefly into the foremost Pairs of Nerves, *viz.* which attend the Muscles of the Eyes and Face; and thence Contractions and tremblings sometimes of the Nose, Cheeks or Lips, sometimes of the Eyes or Mouth ensue. Secondly, sometimes the *Par Vagum* and Intercostal chiefly imbibe the Heterogeneous Particles, and then Inflations or Contractions of the Abdomen and Hypochondres, and also a Palpitation and Trembling of the Heart, a difficult and interrupted Breathing, an intermitting Pulse, and other Symptoms of the middle or lower Region of the Belly chiefly molest us. Thirdly, but sometimes the Morbifick Cause lying behind, chiefly affects the Spinal Marrow; and therefore the outward Members and Limbs are rendred obnoxious to Twitchings and Contractions.

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Moreover as we may conjecture from various Types of the Convulsive affect, it seems that the Convulsive Matter going to these or those Nerves, or to many of them together, either lodges it self in a manner only about their Origines, so that upon frequent Explosions of the Spirits there, an almost continual and very troublesome Vertigo arises; and so Tremblings, and a short Fainting, and danger of Swounding are perceiv'd about the Præcordia, and often Twitchings and gentle Contractions in the Bowels or Muscles: Or Secondly, the explosive Particles convey'd to the Origine of the Nerves, enter deeper into their Processes, and often falling down into the Plexus's of the Nerves, belonging to the Præcordia, or Viscera of the Belly; or also to the outward Members, make there other seats, as it were of Convulsive affects, so that as often as the Spirits are forc't to Explosions about the Origine of the Nerves, presently Fits, as it were Hysterick, Asthmatick, or otherwise Convulsive arise in the Belly, Thorax, or outward Members. I shall now give you some instances of Persons in whom the Morbifick Matter besetting the Origine of the Nerves, and not yet fall'n deeper into their Processes, caus'd frequent Vertigo's, and only gentle Convulsions of the Viscera and Præcordia.

1. A Lady of great Quality, about Thirty years of Age, of a tender Constitution, and of a thin habit of Body, was wont to be sorely afflicted every Winter with a Catarrh distilling on her Trachæa and Lungs, with a Cough, Hoarsness, and great Spitting, but the last year, through a diligent care and caution us'd, she escaped that evil: But after the Winter solstice, upon taking cold, she was seis'd with a violent Head-ach, a ringing in the Ears, a Vertigo, with a mighty Distillation of Rheum at the Eyes and Nose, whence it easily appear'd that the filthy Mass of Serum which was wont before to distil on the Breast, was then wholly depos'd within the Head and Brain: The effect whereof moreover was, that as often as she began to sleep, she was very much troubled with a sort of Hysterick Fits, to which she had never before been obnoxious: For if at any time beginning to sleep, she clos'd her Eyes, presently it caus'd a rising of a heavy thing in her Belly, a Suffocation in her Throat, and Tremblings and Twitchings about the Præcordia: Which affects nevertheless, when she was perfectly awak't, presently ceas't, so that the Diseas'd was forc't to abstain in a manner wholly from sleep for many days and nights together.

Being call'd to this Lady after she was become very weak upon many days Sickness, I was forc't to use only gentle Medicines: Therefore I ordered four Ounces of Blood to be taken from her Foot, and a Clyster of Milk with Sugar to be daily

given her, after which she was wont to have three or four Stools: Moreover every eighth hour I gave her a Dose of Spirit of Harts-horn in a Spoonful of the following Julape.

Take Water of Penny-royal, Wallnuts, black Cherries of each three Ounces, Hysterick Water two Ounces, Syrup of Clovegilly-flowers an Ounce and a half, Castoreum tied in a Nodulus, and hung in the Glass half a Dram, Pearl powdred a Scruple, mix them.

I applyed with good effect Vesicatories behind the Ears, and Cataplasms of Leaves of Rue, and Aron, with Bryony Roots, Sea Salt, and black Soap to the Soles of the Feet.

Sometimes in the Evening I gave *half an Ounce of Diacodium* in a little Draught of the Julape before ordered, which was followed by a moderate sleep without being attended according to wont with Convulsions: Which kind of effect I have often experienced in such a case after Opiats given: For quenching Thirst I gave a Ptisan with Diuretick Ingredients boil'd in it: By the use of these things she was very much reliev'd within a short time: But that which fell out much for her good was, that an Abscess in the left Ear, breaking of its own accord, first discharg'd a yellow Gore, and afterward for many days a vast quantity of thin Ichor: After which Evacuation the Convulsions of the Bowels and Præcordia wholly ceasing, the Disease was perfectly determin'd.

I have known many Persons both Men and Women Diseas'd after this manner, who being ill of a Head-ach, an oppression of the hinder part of the Head, or a Vertigo, perceiv'd in their sleep presently Convulsive motions in the Præcordia or Bowels, or in both of them together: Which happens from the Salley of the tumultuary Spirits reflected from the Brain into the Origines of the Nerves: And as an Opiate gave the Patient before mention'd a quiet sleep without the wonted Sequel of Convulsions, so I have often successfully Cur'd terrible Convulsive Fits, both Asthmatical, and as it were Hysterical, by giving Opiats.

1. A Woman sixty seven years of Age having still a florid Countenance, and being of a gross habit of Body, and who first had liv'd long subject to a Swelling of the Face, and great Fits of the Head-ach, upon the Weathers growing very cold in the Winter, fell into a very grievous Vertigo, with a Trembling of the Heart, a Fainting of the Spirits, and a frequent striving to Vomit: Being put to Bed if she open'd her Eyes, or was turn'd from one side on the other, she was presently seiz'd with a mighty Scotomia, a danger of Swooning, and moreover with a cruel Vomiting. As I was to see her I did not doubt but the cause of the Disease was the Convulsive Matter convey'd from the outward Region

Region of the Head to the inmost Recesses of the Brain, by the ill Breath, or Heterogeneous Combination of which the Animal Spirits being struck, they rais'd the Vertiginous affects as they made their disorderly sallyes towards the Brain, and when they tumultuarily rusht into the Roots of the Nerves, they caus'd the Scotomia, the disorders of the Præcordia, and the striving to Vomit: The Cure of this was perform'd within a few days by the application of large Vesicatories to the Nucha, and behind the Ears; the dayly injection of Clysters, and by a frequent use of Spirit of Harts-horn, and a Cephalick Julape.

Dr. *Willis* gives Instances of Persons in whom some portion of the Morbifick Matter which besets the Origine of the Nerves, descending from the Head, often enters deeper into the Ductus's of the Nerves, and so about their middle and extream Processes and Plexus's makes a *fomes* of an explosive matter, as it were of Gun-powder: But for brevity sake I omit them.

It is observ'd that when a Convulsive Fit begins within the Brain, at the Origine of the Nerves, presently the remotest Spirits residing in the extremities of the Nerves (as many as are predispos'd for that Symptom) fall upon Explosions, and so convey upwards, the Convulsive affect there more strongly begun; which happens for this reason, that when some whole Series of Spirits is disturb'd, those which are in the extream parts, are first destitute of their Original Influx, wherefore those, before others begin to grow in a tumult, and to be irregularly dispos'd, as when a Nerve of the Arm or Thigh is constring'd by lying on it, so that it is hindred of its wonted influence of the Spirits, a stupor with a sense of pricking is first perceiv'd in the Fingers or Toes of the hands or Feet; whence it creeps upwards by degrees towards the places affected: And hence it is we find that if whilst the outmost Spirits are exploded, a strong Ligature, or Compression intercepts the succession of others into the same space, or their progress towards the parts, the Convulsion is usually hindred from ascending upward: Wherefore (as Physical Histories testify) when a stupor beginning at the top of a Finger or Toe of a hand or Foot, creeps to the upper parts with a sense of Formication, or like a cold wind; and at length taking to the Brain, causes terrible Convulsions: If presently at the first seizure the Arm or Leg be strongly bound about, the Convulsion being not able to pass that place, is hindred from getting to the Head: Nay and 'tis an usual thing for Hysterick Women, assoon as a Swelling of their Belly, or an ascent of a heavy lump is first perceiv'd in their Abdomen, to bind about hard the Trunk of their Body with Swathes, and so commonly the Præcordia, and

the Region of the Head are kept from being affected with the Convulsive Fit.

It's likewise observable that if Blood be let forth of a Vein in the midst of a Convulsive or Apoplectical Fit, it presently seems to be congeal'd, so that being receiv'd in a Bason, it does not keep an even and plain Surface like Liquids, but accumulating it self drop upon drop, it rises in a heap like Tallow melted and distill'd into a cold Vessel: Yet as to what some conclude hence, *viz.* that Convulsions depend wholly on the thickness, obstructed motion, and stagnation of the Blood, we must not allow of it: For Blood drawn from Persons that are subject to Convulsions a little before the Fit, is diluted with Serum, and fluid enough: Wherefore we may opine that that Congelation is caus'd by the Fit it self: To wit, because in Convulsive motions, from the excessive Contractions of the Muscles and Viscera, the Blood passing betwixt them, its Spirit and Serum exhaling, is a little solv'd in its mixture, and therefore is somewhat coagulated, just as when Milk by reason of its too great agitation and Separation of parts one from another, hardens into butter, wherefore this kind of Coagulation of the Blood seems rather to be the effect of Convulsions than their cause.

The Therapeutick Method.

AS to the Cure of these kinds of Convulsive affects, which in Men or Women proceed from a Morbifick cause, besetting the Origines of the Nerves: The first Indication will be to withdraw the fuel of the Disease, *viz.* to hinder the Blood from discharging on the Head, the Heterogeneous Particles, either engendred in it self, or receiv'd from elsewhere from the Bowels. For this purpose an Evacuation, ordered both by Purging and Bleeding, unless somewhat indicates the contrary, is wont to be administred with good success.

Vomiting very often gives relief, wherefore let Vomits of the Infusion of Crocus Metallorum, or of Salt of Vitriol, or of Wine of Squills, be given in the first place. Then in a few days let Blood be drawn, either by opening a Vein in the Arm, or by Leeches applyed to the Hæmorrhoid Veins; then afterwards let a gentle Purge be ordered either of Pills, or of a Purging Apozeme, and let it be repeated in due and convenient time.

Take Crato's Pills of Amber, or Bontius's Pills of Tartar two Drams, Rosin of Jalap sixteen Grains, Castoreum a Scruple, Oyl of Rosemary or of Amber half a Scruple, Gum Ammoniacum dissolv'd in a suf-

sufficient quantity of Hysterick-water, make sixteen Pills, let four be taken every sixth or seventh day.

Take Roots of Polypody of the Oak, sharp pointed Dock prepar'd, and of Chervil, of each six Drams, of Male Peony three Drams, Leaves of Betony, Germander, Ground-pine, Vervain, Male Fluellin, of each a handful, Seeds of Carthamus and Burr-dock, of each three Drams, let them boil in four Pounds of Fountain-water to half, add of White-wine a Pound, let it be strain'd into a Matrass, to which put Leaves of choice Sena an Ounce, Rhubarb six Drams, Gummous Turbith half an Ounce, Epithimum, yellow Saunders of each two Drams, Salt of Worm-wood, and of Scurvy-grass, of each a Dram, the outward yellow Coats of Oranges two Drams, let them digest close luted in a Sand heat for twelve hours, let the straining be kept for use: Let it be sweetned (if need be) with a sufficient quantity of Syrupus Augustanus, or with Syrup of Cichory with Rhubarb; the Dose is six Ounces once or twice in a week.

Each day in which Purging is omitted, let Remedies be given for strengthning the Brain, and for garding the Animal Spirits from incurring Heterogeneous Combinations, or from entring upon Explosions: Of which nevertheless let a certain choice be made according to the Temperament, Habit of Body, and Constitution of the Diseas'd: For to such as have a thin habit of Body, and a hot Blood, Medicines must be given which are not hot, and which do not stir the Blood too much: On the contrary to phlegmatick and gross Bodies, whose Urine is thin and watery, and whose Blood circulates but dully, let hot Remedies be ordered, and such as are apt notably to ferment the Humours: In the former case you may prescribe after this manner.

Take Conserve of the Flowers of Betony, Tamarisk, and Male Peony of each two Ounces, Species Diamargariti Frigidi, a Dram and a half, Powder of the Roots of Peony, and of the Seeds of the same of each a Dram, red Coral prepar'd two Drams, Vitriol of Mars two Scruples, Salt of Worm-wood two Drams, with a sufficient quantity of Juice of Oranges, make an Electuary: Let it be taken twice or thrice a day, drinking after it a little draught of the Julape beneath prescrib'd.

Take of red Coral ground with the Juice of Oranges on a Marble, or in a Glass-mortar, and dryed half an Ounce, Powder of Mistletoe of the Oak, and of the Roots of Male Peony, of each two Drams, Sugar of Pearl three Drams, make a Powder; the Dose is from a Scruple to half a Dram, twice or thrice a day.

Take Species Diamargariti Frigidi two Drams, Salt of Worm-wood, three Drams, Aron Roots powdred a Dram, mix them, make a Powder, let it be divided into twenty parts, and let a Dose be taken in the Morning, and at four of the Clock.

Take

Take Powder of the Roots of Butter Bur an Ounce, the Dose is from half a Dram to a Dram twice a day.

Take Leaves of the Bur-dock, and of Aron, of each six handfuls, being slic't and mixt together, let them be distil'd: The Dose is from two Drams to three twice or thrice a day after a Dose of the Electuary or Powder.

Take of this distill'd Water two Pounds, of our Steel prepar'd two Drams, mix them in a Glass, let them be taken after the same manner.

Take Water of Wallnuts simple, and of black Cherries, of each half a Pound, of Snails four Ounces, Syrup of Flowers of the Male Peony two Ounces; the Dose is from an Ounce and a half to two Ounces after the same manner.

Take Shavings of Ivory, and Harts-horn, of each three Drams, Roots of Chervil, Bur-dock, Valerian, of each half an Ounce; Leaves of Betony, Ground-pine, Scolopendrium, tops of Tamarisk, of each a handful: Barks of Tamarisk and of Bitter-sweet of each half an Ounce, let them boil in four Pounds of Fountain-water to the consumption of a third part, add of White-wine eight Ounces, strain it into a Flaggon, to which put Leaves of Brook-limes, and of Cuckow-flower, of each a handful, make a warm and close Infusion for four hours, let the straining be kept in Glasses close stopt: The Dose is six Ounces twice a day, after a Dose of a solid Medicine. Sometimes in such an Apozeme let two Drams of our Steel be infus'd, and taken after the same manner.

In the Summer time the use of Mineral Waters is proper, for want of them let our Artificial Waters be given in their stead.

But if for the reasons above cited hot Medicines are indicated, we may proceed after the following method.

Take Conserve of Rosemary-flowers, and of the yellow Coats of Oranges and Limons, of each two Ounces, Wallnuts, and Mirobalans condited, of each in number two, Lignum Aloes, yellow Saunders, Roots of Serpentaria, Contrayerva, Angelica and Aron, of each a Dram, Vitriol of Mars (or prepar'd Steel) four Scruples, Salt of Worm-wood and of Scurvy-grass of each a Dram, with a sufficient quantity of Preserve of Wallnuts, make an Electuary. Let the quantity of a Nutmeg be taken twice a day, drinking after it a Dose of an appropriated Liquour.

Take Roots of Male Peony, Angelica, red Coral prepar'd, of each two Drams, Sugar dissolv'd in water of Snails boil'd to a consistency for Tablets six Ounces. Oyl of Amber highly rectified half a Dram, make Tablets according to Art, each weighing about half a Dram, let one or two be taken twice or thrice a day, drinking after it a Dose of an appropriated Liquour.

Take Roots of Virginia Serpentary, Contrayerva, Valerian of each two Drams, red Coral prepar'd, Pearls, of each a Dram, Winters-bark, Roots of bastard Ditany of each a Dram, Vitriol of Mars, Salt of Worm-wood, of each

each a Dram and a half. Extract of Centory two Drams, Ammoniacum dissolv'd in Hysterick-water what suffices, make a Mass for Pills. Let four Pills be taken in the Morning and at four in the Afternoon.

Take Spirit of Harts-horn, or of Soot, or of Mans Blood, or of Sal Armoniack what suffices, take from ten to twelve Drops Morning and Evening in a Spoonful of the Julape, drinking after it a little draught of the same.

Take Leaves of Betony, Vervain, Sage, Cuckow-flowers, Aron, Bur-dock, of each two handfuls, green Wallnuts in number twenty, the Coats of six Oranges and four Limons, Cardamoms, Cubebs, of each an Ounce; being slic't and bruis'd, pour to them Whey made with Cider or White-wine six Pounds, let it distil according to Art: The Dose is two or three Ounces twice a day after a Dose of a solid Medicine: To two Pounds of this add of our Steel two Drams.

Take Water of Earth-worms, and of Snails, of each six Ounces; of Wallnuts simple four Ounces, Raddish-water compound two Ounces, double refin'd Sugar two Ounces, make a Julape: The Dose is four or six Spoonfuls twice a day after a Dose of a solid Medicine.

Take Millepedes cleans'd a Pound, Cloves slic't half an Ounce, pour on them of White-wine two Pounds, let them distil in a Gourd-glass; the Dose is from an Ounce to an Ounce and a half twice a day.

We may prescribe for poor People Remedies more easie to be had after this manner.

Take Conserve of the Leaves of Rue made with an equal part of Sugar six Ounces. Let the quantity of a Nutmeg be taken twice a day, drinking after it a Decoction of the Seeds and Roots of Bur-dock made in Whey, prepar'd of White-wine.

Or let a Conserve be made of the Leaves of the Tree of Life, with an equal part of Sugar; the Dose is from half a Dram to a Dram twice a day.

Take Powder of Millepedes prepar'd three Drams, Ameos-seeds a Dram, make a Powder, divide it into ten parts, let a Dose be taken twice a day. Or twelve Millepedes being bruis'd with White-wine pour'd on them, let the Juice be expresst, make a draught, let it be taken twice a day.

In the mean while that these Remedies are taken inwardly, it is proper sometimes to raise Blisters by applying Vesicatories on the Nucha, or behind the Ears; for so the Serous and sharp Humours are very much deriv'd from the Head: Moreover Sneezing-powders, and Apophlegmatisms often give great relief. The drawing of Blood from the Hæmorrhoid Veins, or from the Foot ought to be sometimes repeated: And during the Fit, Plaisters or Cataplasms are applyed to the Soles of the Feet with good effect: It is good also to apply Epispasticks about the Legs and Thighs.

CHAP.

CHAP. IV.

Of Convulsive motions, whose cause lyes about the Extremities, or within the Plexus's of the Nerves.

THat Convulsive affects, sometimes without any fault in the Head, arise from the Irritation and Explosion of the Spirits lying about the extremities of the Nerves, it plainly appears even from this, because when Medicines smartly twitch the Coats of the Stomack or Intestines, or when Worms gnaw them, Convulsions do not only follow in those parts, but likewise Convulsive motions are sometimes retorted on the Members and outward Limbs: For as we have shewn elsewhere, when a sense of great pain torments any part, and is communicated from that to the *Primum Sensorium*, presently upon it, the Spirits being there irritated, an involuntary and irregular motion is wont to be thence reflected; and that not only by those Nerves, by which the sense of pain was brought, but sometimes the Convulsion is reciprocated also by others, either of the same pair, or belonging to a pair wholly differing: Thus a Stone fixt in the Ureter causes Convulsions, not only in the Vessel affected, but in a manner in all the Viscera of the Belly, and cruel Vomitings for the most part follow upon it: Wherefore it is not to be doubted but Convulsive Diseases also, and some such Symptoms are often caus'd by reason of some outward offence offer'd the extremities of the Nerves within the Membranes, Muscles or Viscera: Nay and if at any time in Hysterick, Hypochondriack, and certain other passions, Convulsive motions are rais'd through the fault of the Womb, Spleen, or some other of the Viscera, the Head being without hurt; truly those arise and are propagated on every side into various Regions of the Body only this way, *viz.* by the annoyances of the rest of the parts by the Way of the Nerves, and not at all by vapours convey'd to the Head. I shall now give you some instances and observations of Convulsions arising from the Extremities of the Nerves.

A delicate Virgin about the sixteenth year of her Age falling from a Horse, and dashing her self against a rough Stone, sorely hurt her left Breast, whence a Swelling with a pain arose, which Symptoms nevertheless at first seem'd to be mitigated by the use of Remedies, and afterwards for a long time to pass indifferently well; but after three years upon taking cold, and having us'd a very

very ill Diet, all things began to return a new; the place hurt swelling up in a greater bulk, was affected with a most acute and almost continual pain, so that the Diseased, through the mighty torment, passed many days and nights without sleep; nor could she indure that the Glandules of her Breast, then become more swollen, should be toucht or handled, nay nor any noise or concussion to be made in her Chamber.

When to this Tumour, degenerating towards a Cancer, Fomentations and Cataplasms of Hemlock and Man-drake, and other stupifying things, and Repercussives were apply'd, the noble Lady began to undergo certain Convulsive affects, which often molested her: In the first place as often as a violent pain came in her Breast, she felt there prickings, and likewise Convulsions and Contractions shooting in and out: Presently after the Ventricle and Hypochondres, and after that the whole Abdomen were wont to be blown up, and mightily distended with a rumbling and a straining to Vomit: By and by the same affect being convey'd by degrees to the upper parts, took away her Senses, and shortly upon it so strong Convulsions followed in her whole Body, that the Diseas'd could scarce be heal'd by three or four robuit Men.

These kinds of Fits at first came at random, and were only rais'd occasionally, *viz.* they ensued as often as the pain of the Breast was rendred more intense by some evident cause: Afterward those Convulsions more frequently molested her, and at length becoming periodical and habitual, they return'd twice a day, *viz.* constantly just so many set hours after Meals: And when Diseas'd had been miserably afflicted after this manner for six Months, at length she began to be troubled with a certain Vertiginous affects which continually followed her: For which evil when a Fomentation of Aromatick and Cephalick Herbs had been for some time applyed, she grew better as to her Vertigo; but from thenceforwards she was continually molested with a new and very wonderful Symptom, *viz.* a violent dry Cough following her day and night, unless when she was fallen asleep: After this noble Virgin had tryed divers sorts of Remedies, prescrib'd by several Physicians, without much benefit, at length upon the use of the Baths of a moderate heat at *Bathe*, she was reliev'd, and being marryed presently upon it, after conception and her being delivered of a Child, she recovered by degrees.

As to the violent Cough above mention'd, it seems that that Symptom depended on the Origine of the Nerves being affected, and not on any stuffing in the Lungs, for she spit forth nothing with the Cough; we say therefore that the Morbifick matter depos'd near the Origine of the Nerves being rarified and mov'd

by the Fomentation, entred deep in at the Mouths of the Nerves that go to the Lungs, and stirr'd up perpetual Convulsions in the Fibres and Filaments thereof.

A noble Matron Fifty years of Age, after that her Menses had ceas'd to flow for a year and a half, first began to complain of a pricking pain in her left breast, then afterward that affect ceasing, she was taken ill about the Stomack: To wit, a hard, and as it were schirrous Tumour arose there with an oppressing pain; this was presently followed by an inflation of the Ventricle, with a difficult Breathing, a Nauseousness and frequent Vomiting. Then the Disease growing worse and worse, with a more acute pain, and shooting in and out every way, she fell into Conulsive affects of the Ventricle: To wit, the Convulsions shooting in that place several ways, she was almost continually in such a torment, as though the Stomack were torn in several pieces: Moreover a continual Perturbation of mind, and frequent Fainting Fits leading even to Death's door, accompanied with a Thirst and Watchings, pursued the sick Lady; all which Symptoms she plainly perceiv'd always to arise from that Tumour of the Ventricle (to wit, its sharp and heterogeneous Particles continually entring the Extremities of the surrounding Fibres and Nerves.) To this Person all Vomitory, Cathartick, Antiscorbutick and Hysterick Medicines, without giving any ease, seem'd rather to have prov'd offensive and prejudicial: After Bleeding by Leeches, and the use of Asses Milk she receiv'd some benefit, and afterward by long drinking Mineral Waters, she was very much reliev'd.

What has been said here of Convulsions from a Morbifick cause besetting each end of the *Systema Nervosum* will be made more clear when hereafter we shall treat particularly of the chief kinds of Convulsions, *viz.* of Hysterick, Hypochondriack and other Passions: In the mean while it will not be necessary to add a Therapeutick method to this Hypothesis of Convulsions happning by reason of the Extremities of the Nerves being affected; because the ways of Curing this affect may better be accommodated to those that we shall hereafter deliver in particular.

I have found also by ocular evidence, that there are Convulsive affects whose cause, or Morbifick matter lyes within the Plexus's of the Nerves: For opening the Body of a noble Lady, who had been horribly troubled with those affects they call Hysterical a little before her decease, I found the Womb wholly without fault, but along the Nervous Plexus's of the Mesentery, which (as it seem'd) had been wont to swell and rise up in a bulk, I found the Membranes of that Entral loosen'd and severed from each other, so that they appear'd every where swoll'n and lax, as if blown up in little bubbles or bladders. Nor is it less probable

probable that the pains of the Co'ick often proceed from a sharp and irritating matter contain'd in those same Plexus's. Moreover such a kind of matter within the Plexus's of the Heart, seems to cause there horrible Tremblings and Passions, and within the Plexus's of the Lungs or Neck, terrible Fits of the Asthma, &c.

CHAP. V.

Of Convulsive motions arising from the Liquour lying in the Nervous Bodys, and irritating all their Processes into Convulsions.

IT is obvious almost to daily experience, that Convulsive affects run through the whole *Genus Nervosum*, and infest sometimes these parts, sometimes others, sometimes many together: For in some we may observe that the Tendons of the Muscles every where leap, and are drawn with Convulsions; in others that all the outward Members are in many places bent or extended this way, and that, with various flexions and contorsions: We see some forc't by a masterless and ungovern'd impetus of the Spirits, sometimes being struck as it were with a rage, to run or leap, sometimes strongly to belabour the earth, or any thing that comes in their way with their Fists, which unless they did, they would fall presently into Swoonings and horrible Fainting Fits. It would be too tedious to enumerate all cases of those general Convulsions passing through the whole *Genus Nervosum*: But such like Symptoms, though various and manifold, may in some sort be reduc't to three chief heads, *viz.* as they chiefly depend on three sorts of causes: For since in these Convulsions passing from place to place, we ought to suppose the whole Nervous Liquour to be vitiated, and the Animal Spirits, every where abounding in it, to be adulterated, and consequently to be almost continually exploded: We may observe that that taint for the most part is communicated both to the Nervous Juice, and the Spirits every where accompanying it, by one or the other of these three ways; *viz.* First, Either from Poyson or Witchcraft; Secondly, From a malignant or ill-determin'd Fever, *viz.* in which the Morbifick matter is discharg'd on the Brain, or *Genus Nervosum*; Or Thirdly, When the Nervous Liquour in long process

of time, by reason of a Scorbutick or otherwise vitiated affect, degenerates from its due Crasis into a sharp, acid, or otherwise Preternatural and Convulsive Liquour. We shall here consider of each of these cases, and first of Convulsive Fits, which are produc't from Poyson or Witchcraft.

First therefore, That some Poysons act on the Nervous Liquour rather than on the Blood, and depraving it, cause chiefly Convulsive affects, it plainly appears from eating of Cicutaria Apium risus, deadly Nightshade, the wild Carrot, and other offensive Herbs, which is wont to be followed in a short time after with horrible Contractions of the Stomack, a Numness, Delirium, and Twitchings and Convulsions in the whole Body of the Tendons: Moreover those kinds of Convulsive affects ensue in such as are bitten by a mad Dog, and other Venemous wild Beasts when the Virulent Miasm receiv'd by the Nervous Juice, having lay'n hid in it a long time, at length exerts it self, and infects and poysons with its ferment the whole Mass of the Liquour in which it is involv'd: And this is more clearly manifested by the wonderful Symptoms, *viz.* the painful Convulsions, and continual Dancing which are affirm'd by Authors of Credit to ensue upon the bite of a *Tarantula*: Which doubtless happen, because upon the bite of that Animal, some Venemous Miasms are convey'd into the Body of Man, which nevertheless being little injurious to the Blood and vital Spirit, assoon as they have past from it into the Nervous Liquour, presently spread themselves like a Ferment, through its whole Mass, and infect the Animal Spirits, every where abounding in it; so that they being forc't apart from one another, and driven hither and thither in a disorderly manner, cause Convulsive affects, which sometimes are accompanyed with a Contraction of the containing parts, sometimes with a languor and resolution of them.

If it be asked why the painful Convulsions which are rais'd by the bite of a *Tarantula*, being presently appeas'd by Musick, are wont to be chang'd into a Dancing, I answer, that the Venom communicated to the Nervous Juice by the bite of a *Tarantula* is more mild than to be able wholly to extinguish the Animal Spirits, or altogether to dissipate and force them to very violent explosions, being driven into divers parts; but can only put them to flight, and being driven hither and thither, egg them to flight, and in a manner only pain-causing Convulsions: Now Musick by its gently soothing Nature, readily gathers together in one, and mutually associates the Spirits so dissipated: Wherefore when the said Spirits, by reason of Virulent Miasms sticking to them, are continually prone to Involuntary and Convulsive motions,

motions, the Melody disposes and directs them, being allur'd together, into such Convulsions, that entring the Bodys of the Nerves in a certain series and order, they are carryed in certain limited Tracts as it were, till at length the Particles of the Venom being wholly evaporated, and the fury and impetus of the Spirits wearyed, they have wholly shaken off that rage: And indeed Musick readily forces sound and sober Men, even against their wills, or thinking of other things, to actions emulating the Tune heard; so that a Piper no sooner begins his Lesson, but the standers by begin to move their Hands and Feet: We need not wonder therefore in Men bitten by a *Tarantula*, where the Animal Spirits being stimulated to motion as it were, are forc't to skip and wander from one place to another of themselves, if upon playing on a Harp, they are put upon Dancing, and observing of regular motions.

To this is a kin the Evil, which is call'd the *Dance of S. Vitus*, concerning which *Horstius* relates, that he spake with certain Women, who visit yearly the Chappel of S. *Vitus*, which is within the Precincts of *Ulmes*, and there exercise themselves so long in Dancing day and night, with a Perturbation of mind, till they fall on the Ground like Persons in an extasy: By which means they seem to be restor'd to themselves, so that they feel little or nothing for a whole year, till the time of *May* following, and then they declare themselves tormented with such a restlessness of their Members, that they are forc't to betake themselves again about the Feast of S. *Vitus* to the foresaid place, to renew their Dancing.

Indeed it is a usual thing (as I have often observ'd) both for Men and Women to be infested with such a restlessness, and certain rage as it were of the Members, that they are forc't to walk till they are a weary, and also to dance and run up and down, by this means to avoid greater Disturbances and Swoonings, which would otherwise seize them: The reason of which seems to be, that the Animal Spirits, because stimulated in the whole *Genus Nervosum* from a Heterogeneous Combination, become wholly in a rage and ungovernable, which therefore ought to be so exercis'd and wearied, both that they themselves may be mastered, and that the Heterogeneous Combination may be shaken off.

That Convulsive affects are sometimes caus'd by Witchcraft, it is both vulgarly believ'd, and every where affirm'd by many Authors that deserve Credit: And to grant that wonderful affects are often produc't in the Body of Men by tricks of the Devil, *viz.* in as much as by the wonderful subtlety in operating, in which he excels, he insinuates Atoms or Heterogeneous Corpuscles

puscles into the sensitive Soul, or the Texture of the Animal Spirits, and so sometimes stimulates its Functions, sometimes binds them, sometimes violently perverts them: Nay and farther in some manner he enters the Body of Man himself, and being as another Soul of a more powerful Nature, is co-extended to it, actuats all the parts and members, inspires them with an unwonted Vigour, and governs them at his pleasure, and stirs them up to the performance of wonderful and supernatural actions: Grant this I say, yet all kinds of Convulsions which appear prodigious, as being besides the common course of this Disease, ought not presently to be imputed to inchantments of Witches, or tricks of the Devil, for often, though appearing strange, they proceed from meer natural causes, and stand in need of no other Exorcisms for a Cure, than Remedies which are wont to be prescrib'd against Convulsive affects: In truth the Animal Spirits when indued with a very great explosive Combination, and discharg'd together by it, exert so much of strength and vigour above their proper and wonted force, as a flash of Gun-powder above the burning of a common flame, so that such, who, being obnoxious to this Disease, may when they are out of the Fit be govern'd, carryed, and led at pleasure by the guidance of one Man, when the Fit comes upon them, are not to be manag'd by the greatest strength and endeavours of four or more robust Persons: But if when any Person is distempered there be a suspicion of Witchcraft or Fascination, there are chiefly two kinds of motion which are wont to create and maintain it; *viz.* First, If the Patient uses such Contorsions and Gesticulations of the Members, or of the whole Body, which no sound Man, even a Mimick, or any Tumbler, is wont to imitate; And secondly, if he exerts a strength, which exceeds all humane force, to which if there be joyn'd excretions of monstrous things, as when heaps of Pins are cast up by Vomit, or living Animals are voided by seige, it comes to be without dispute that the Devil has, and acts his part in this Tragedy.

CHAP.

CHAP. VI.

Of General Convulsions which are wont to be rais'd in Malignant, Ill-determin'd, and some Anomalous Fevers.

EVery Man knows that Convulsions sometimes happen to Persons in Fevers, and that from thence a great Prognostick is taken of death or danger: For as in Malignant Fevers, and sometimes in ordinary Fevers of an Ill-determination, a Vertigo or Delirium arise from the Morbifick Matter's being depos'd from the Blood in the Brain; so from the same fall'n into the *Genus Nervosum*, Contractions and Twitchings of the Muscles and Tendons, and also sudden shakings of the Members and Limbs, and sometimes horrible stiff extensions in the whole Body ensue, which sorts of Convulsive affects happen for the most part about the height of Fevers, when the Morbifick Matter, first heap't together in the Blood, is convey'd thence into the Brain, and that being either presently past through, or infected together with it, is carryed into the *Systema Nervosum*, and thence Convulsive affects, with or without a Delirium are rais'd.

Nevertheless besides these kinds of Convulsive affects which ensue upon Fevers, and are secondarily rais'd, we may observe sometimes in a Malignant Constitution of the Air, and after a breath of a pestilential Contagion, that the Nervous Liquour is infected before the Blood, or apart by it self from it, and that then a Delirium and Convulsions precede the Feverish Distemper. Moreover I have often observ'd that some Anomalous Fevers have been rife, in which the Blood being scarce seen to boil or to be extraordinary hot, the beginnings of a slow, and very dangerous Fever have been first laid in the Nervous Humour; which being rais'd by degrees to a Maturity, caus'd Convulsive affects with a Delirium or Mania, and other failings or exorbitancies of the Animal Spirits: For the Diseas'd not complaining of heat or drought, on a sudden becoming weak, and as it were enervated, were presently rendred obnoxious to a frequent Giddiness, also to Tremblings and Leapings as it were of the Limbs, and likewise to Twitchings and Contractions of the Muscles and Tendons, and to pains moving from one place to another. This kind of Sickness, in regard it seems to consist in the solid parts, rather than in the Blood, is call'd by some Physicians a Malignant Hectick

Hectick Fever, when in truth the same being chiefly rooted in the Nervous Humour, is better said to be a Convulsive Disease of the Nerves.

Horstius mentions a Convulsive and Malignant Disease, which heretofore was Epidemical in *Hassia*, *Westphalia*, and the Neighbouring parts; those that were seiz'd with it, without any Feverish heat, or immoderate effervescency of the Blood, as they were about their household affairs, on a sudden scarce perceiving themselves sick, were wont to feel a Formication with a Numness passing in and out about their Hands or Feet, and sometimes in both: Presently after their Fingers and Toes, and likewise their Arms and Legs, one while were closely contracted, another while strongly extended, as though they had grown stiff: These Contractions and Extensions followed each other alternatively, and now and then chang'd places, so that at one time the affect lay in this part, and then presently in another: But in case (as it often fell out) the Disease seiz'd the whole Brain all at once, Universal Convulsions, and often Epileptical Fits infested the Diseas'd; Moreover they were obnoxious at certain times to a Delirium, Mania, and sometimes to a Lethargy: This Distemper continued a long time without a Crisis, or being perfectly resolved, and could scarce ever be so throughly Cur'd, but ill and morbid Dispositions of the Brain and Nervous parts lasted afterwards during the whole Life.

It plainly appears that this Disease and its Symptoms wholly depend on the Corruption and mighty Depravation of the Nervous Juice: And the reason why in this Nervous Fever, there happen'd a difficult, or rather no Crisis, or Solution at all, was because the Nervous Juice being tough and mucilaginous, as it were, and consequently slow in motion, is not purg'd as the Blood, by an excretory effervescence, nor does it easily fall into such a fermentation, whereby the pure is separated from the impure.

I have known a Disease like this, often to have reign'd in our Country, and to have past through whole Families, at least amongst the Children and younger People. Some years since a popular Fever sorely infesting the Brain and *Genus Nervosum* very much reign'd about *Oxford*, and indeed almost throughout *England*: The Narrative of which Disease, written at the time it reign'd, *viz. An.* 1661. I shall here briefly insert; for from hence it appears after what manner, and by what causes Convulsive Symptoms which happen in all Fevers, are wont to be rais'd.

An Account of an Epidemick Fever, reigning An. 1661. which chiefly infested the Brain and the Genus Nervosum.

AFter the Vernal Equinox *An.* 1661. a certain Anomalous and unusual Fever, seiz'd some Persons here and there, which nevertheless within a Month became so Epidemical, that in many places it began to be call'd the New Disease: Reigning chiefly among Children and young People, it was wont to afflict them with a long, and as it were, Chronical Sickness: Nay and sometimes though rarely it infested Persons stricken in years, and aged, but it kill'd them sooner, and more certainly: The affect first seizing any Person, so tacitely stole upon him, that the beginnings of the Sickness were scarce perceiv'd: For arising without any immoderate heat or great thirst, it presently caus'd a great weakness in the whole Body, with a languor of the Spirits, and a deadness of the Animal Functions: The Stomack loathed all Food, and found it self oppress't by what was taken into it, and nevertheless it was not inclin'd to Vomit. The Diseas'd being indispos'd to all motion, sought only to lye on a Bed, and do nothing: Within a short time, and sometimes from the first invasion of the Disease, they complain'd of a great Giddiness, a ringing in the Ears, and often of a turbulent motion and great perturbation in the Brain: Which sort of Symptoms were usually accounted a Pathognomick sign as it were of the sudden approach of this Disease; in case it happen'd that these were wanting, or remiss in some Persons, instead of the Head being affected after that manner, the Disease fixt it self deeper in the Breast, and rais'd a Cough, as we shall presently acquaint you: Now whilst upon the Brain and Nervous Appendix, their being affected after this manner, the Animal Spirits presently from the beginning of the Sickness wax't dull, a slow and hectick Fever as it were, was kindled in the whole Body: Nevertheless the effervescence of the Blood, which was scarce continual, but hapning at random, and uncertain, was more intense in some, and more remiss in others according to the Crasis of the Blood it self: And consequently the Thirst, roughness of the Tongue, and other Symptoms, which depend on the Feverish Distemper, troubled them more or less. Sweating did not happen of its own accord, nor could it readily or with ease be rais'd by Art: Nay farther, neither this kind of Evacuation or any other ever hapning as it

were by way of Crisis, put an end to this Disease on a sudden: But continuing for many Weeks and sometimes Months, it brought the Diseas'd into a mighty Atrophia, and often cast them into an incurable Consumption.

About the time of the Diseases increase, which in most Persons happen'd within eight days, if the affect (as it often was wont) seiz'd chiefly on the Brain, and *Systema Nervosum*, severe Symptoms, *viz.* a plain Frensy, or deep Stupor, or a total insensibility commonly infested their Oeconomy: For I have frequently observ'd in many Children, and often in Women, after seven or eight days of their being seiz'd, that they have wholly lost both Sense and Speech, so that they have lain for some time, nay sometimes for a whole Months space, without knowing Persons present, and their Excrements passing from them after an insensible manner: And if the use of their judgment and reason in some measure held, yet they were troubled with a frequent Delirium, and always talk't light-headed in their sleep. But in Men, and others of a hot Constitution, upon the Morbifick Matter's being convey'd to the Head, instead of a Crisis, a Fury or dangerous and often deadly Frensy ensued: But if neither a Stupor nor violent Distraction seiz'd them, a Scotomia, Convulsive motions, with Contractions of the Members, and Twitchings of the Tendons greatly molested them: Almost in all the Diseas'd, the Belly for the most part was loose, and voided plentifully sometimes yellow, sometimes thin and serous Excrements, which stank mightily. It was seldom that any were seiz'd with a Vomiting: The Urine in the whole course of the Disease (unless when the Morbifick Matter taking plentifully to the Brain, threatn'd a Frensy) was of a deep red colour, so that some by reason of its deepness, judg'd this Fever to be absolutely Scorbutical: Which nevertheless appear'd to be otherwise, because Antiscorbutick Remedies, (whereof a great many, and almost of all kinds were tryed) had little or no effect: It was very much to be admired, how soon after the seizure of this Disease, the Flesh of the Sick fell away, so that they were brought to the dryness of a Skeleton, when in the mean time there was no exceeding great heat to consume the Solid parts by little and little, nor any violent Evacuation greatly to waste them.

Besides these evils infesting the Region of the Head, an affect no less dangerous often seiz'd on the Breast: For in some a very troublesome Cough, with much and thick Spittle was rais'd: This in some Persons happen'd about the declining of the Disease, *viz.* when the Confines of the Brain obtain'd a calm, the Clouds, as it were, being discharg'd thence on the Breast, a mighty Catarrh presently fell on the Lungs. But in some, especially who suf-

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fered little from the Diſeaſe in the Head, preſently from the beginning of the Fever, a violent Cough, and a Spitting of filthy Matter, accompanied with a Conſumptive Diſpoſition, as it were, ſeiz'd them, and precipitated them, ſuddenly and unawares into a Conſumption; from which neverthelefs, by a ſeaſonable uſe of Remedies, they often unexpectedly recover'd: I obſerv'd in ſome, after a long failure of the ſenſitive faculty, and an oppreſſion of the Brain from the Morbifick Matter, that at length Tumours enſued in the Glands about the Neck, from which, aſſoon as ripen'd and broken, a thin and ſtinking Ichor flowed for a long time, and gave eaſe: I have ſeen alſo Watery Wheals rais'd in other parts of the Body, which have paſt into hollow Ulcers with difficulty to be Cur'd: Sometimes ſmall Spots, and as it were Flea-bites appear'd here and there: Though I have not heard that broad and livid Spots ever were to be ſeen in Perſons ſick of this Diſeaſe: However notwithſtanding this Fever had not any very Malignant breakings forth, yet it was not free from Contagion: For in the ſame Family it ſeiz'd almoſt all the Children and younger People one after the other; and often Perſons ſtricken in years, who attending the ſick, familiarly us'd about their Beds and Bed-cloaths, were infected with the ſame Diſeaſe: Yet I muſt ſay there was not ſo great a ſuſpicion of infection, that for that reaſon the Friends of the Sick, ſhould be wholly forbidden to viſit them, or converſe with them.

Though all along the courſe of this Diſeaſe (unleſs when the Brain was greatly aſſail'd) it appear'd only mild, and paſt without any dreadful Symptom, neverthelefs its Cure was always difficult, and was not perform'd but after a long time: For the Diſeas'd ſeldom recover'd within three or four Weeks, nay for the moſt part ſcarce within ſo many Months: But if this Diſeaſe fell on Men of a decayed Age or Strength, eſpecially on ſuch as were before ſubject to Cephalick Diſeaſes, as the Lethargy: Apoplexy or Convulſions, it often kill'd them in a ſhorter ſpace. Or if there were any hope of recovery, it could be carryed on very ſlowly, (ſcarce any Remedies affording a ſenſible relief) ſo that the Diſeas'd were no ſooner gotten without the Sphere of this Fever, but they found themſelves within the Confines of a Conſumption.

If the formal reaſon and cauſes of the foreſaid ſickneſs be enquir'd into, it plainly here appears that the Liquour which lies in the Brain and Genus Nervoſum, for the moſt part, together with the Blood, was in fault, and was the immediate cauſe of the Symptoms that ſeem'd chiefly preſſing, *viz.* in as much as the Latex, preſently from the firſt invaſion of the Diſeaſe was be-

come more impoveriſht than its wont, and effæte, as it were, and therefore a Languor and Enervation, with a Spontaneous Laſſitude, and a Diſability to motion, together with a ſudden Conſumption of the Body, happen'd to the Diſeas'd: Though ſtill the default of this Latex neceſſarily depends on the Dyſcraſy of the Blood, and of the ill Conſtitution of the Brain [*but here, as in other places, I refer you to Dr.* Willis *himſelf, for a full Ætiology of Symptoms.*]

I have often obſerv'd in this Fever, after Oat Broath, a Decoction of Barley, and other thin Dyet, that no leſs Ebullition of the Blood has been rais'd, than by a full Meat Broath: For indeed on one ſide as well as the other, the Nutritive Juice ſent from the Cnyle into the Blood, in regard it was not imploy'd in the work of Nutrition, troubled the Blood, as ſome Heterogeneous thing that would not duely mix with it: And by reaſon of the Particles of this ſuperfluous Juice, ſent off in a plentiful manner with the Serum, the Urine was very thick and red, and mightily fill'd with Contents: And for this reaſon the Belly for the moſt part was looſe, in as much as the Blood being full of a Nutritious Juice, ſuck't a leſs Portion of Chyle from the Bowels, and diſcharg'd again into the Inteſtines a part of that which was brought into it; moreover the Feverith Diſtemper ſtuck for ſo long time in the Blood, becauſe till upon the Reſtitution of the Animal Governance, Nutrition was rightly perform'd, that ſuperfluous Matter was heap't together in the Maſs of Blood. I ſhall now give an inſtance or two of Perſons affected with this Diſeaſe.

A Robuſt and Florid young Man, about the beginning of the Spring, *An.* 1661. falling ſick without any evident cauſe, ſoon became weak, and as it were enervated, with a loſs of Appetite, and a languiſhing of the Spirits: Cathartick Remedies, Antipyreticks, Digeſtives, nay and Antiſcorbuticks, and others of divers kinds, being given him, according to the preſcripts of famous Phyſicians, did not the leaſt good: But the Diſeas'd ſtill continuing in a languiſhing condition, lay by it for ſix weeks, with a ſlow Fever of uncertain returns, a quick and weak Pulſe, and a deep red Urine. Moreover being mightily pined away, he complain'd of a ringing in his Ears, and an Undulation of ſound, as it were, in his head: Though he was affected with a great Stupor, yet his Sleeps were very much troubled and interrupted with a talking Light-headed. After forty days, the Fever not yet declining, it was thought good to draw about four or five Ounces of Blood from the Veſſels of the Fundament by Leeches. Hereupon preſently the Fever began to be very much exaſperated, for the heat became more intenſe, with a Thirſt, Watchings,

ings, and an almoſt continual toſſing of the Body, the Tongue alſo growing dry and rough; ſhortly after a troubleſome Cough, with much and diſcolour'd Spittle enſued: There were carefully given him Almond and Barley Drinks, with temperate things againſt the Cough boil'd in them, Water of Milk diſtill'd with Snails and Herbs appropriated to the Thorax, Powder of Shells, Niter prepar'd, and likewiſe Cordial Opiats; which nevertheleſs ſcarce giving any relief, the Diſeas'd ſtill became weaker: And when after this manner, having been ſick above two Months, the Feveriſh Diſtemper, and the Cough alſo daily growing worſe, he ſeem'd to be at Death's Door, at length a Sweat hapening of its own accord, which ſometimes came upon him every night, ſometimes every other night, he grew better by degrees thereby, and uſing afterwards the foreſaid Medicines, he became perfectly well within ſix weeks.

Whilſt this Perſon lay ill, I went to ſee another about Twelve years of Age, affected after the like manner; but this, when I was firſt call'd, having lain ill above a Month, was reduc't to a Skeleton: Moreover he was affected with a Giddineſs, a ringing in the Ears, and a Deafneſs, and likewiſe with a violent Cough accompanied with a yellow, and as it were Conſumptive Spittle: His Pulſe was quick and weak, his Urine red and thick, his Appetite very much dejected, his Spirits ſo faint, and his Strength ſo fall'n, that he could not keep himſelf from his Bed: To this Perſon I gave often in a day Milk diſtill'd with Snails and temperate Herbs: Moreover inſtead of ordinary drink, I ordered him daily to take an opening Decoction, ſuch as is us'd in the Rickets: By the help of which Remedies he ſeem'd to be reſtor'd to his health within a Months ſpace.

This Fever in a certain Noble Mans Family, prov'd very fatal amongſt his Children, who had been originally ſubject to Cephalick affects. About the Vernal Equinox, a Boy of about Eleven years of Age, began to fall ſick. In the firſt place without an intenſe heat or drought, a loſs of Appetite, and failing of Strength came upon him. Moreover an almoſt continual Vertigo moleſted him, with a frequent inclination to Fainting, ſo that he often thought himſelf ready to fall in a Swoon: To this Perſon, by the advice of ſome Nurſe that attended him, Glyſters were daily given: And afterward when from the foulneſs of his Tongue and Mouth, the manifeſt ſigns of a Fever appear'd, that Empirick gave him a Vomit of the Infuſion of Crocus Metallorum. And the ſeventh day giving him a Cordial Powder, and covering him over with Cloaths, ſhe made him Sweat: His Skin no ſooner began to be moiſt, but preſently ſpeaking Light-headed,

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he complain'd that his Cap was fall'n into water, soon after becoming Speechless he dyed, (whilst I was sent for) within four hours.

Shortly after, the same Disease seiz'd his Sister who was younger; whose sickness nevertheless, because it was accompanied with a frequent Coughing and Spitting, was first thought to be only a cold taken: But within a few days, that Cough became manifestly Convulsive; for in Coughing the Diaphragm being rais'd upward, and so held for some time, by a repeated Systole, a mighty Shrill noise, as though she were suffocated came from her: Afterward this little Girl growing more manifestly Feverish, and complaining of a thirst and heat, past the nights without sleep, with a mighty tossing in her Bed, and after a while speaking Light-headed, she complain'd as her Brother had done before, that her Cloaths were fall'n into the water; and at all things grew worse, she began to be troubled with Convulsive motions, first in the Limbs, shortly after in the Face, and then in the whole Body: The Fits returning frequently, *viz.* twice or thrice within an hour, very sorely pursued her, so that this poor Wretch dyed within the space of twenty four hours after the greater Convulsive affects had seiz'd her, the Tone of the Animal Spirits being wholly subverted. Whilst the Convulsive Fits prest upon her, the Pulse was very much disordered, and often intermitted, and she was affected with a frequent Vomiting.

Because this Fever seizes some Persons predispos'd for it almost yearly, and haply hereafter may at some time become Epidemical, by reason of the Ill Constitution of the year, I think it may not be amiss to delineate some method in order to its Cure.

The Therapeutick Method.

CConcerning which in the first place, you may note, that Critical days are by no means to be observ'd in this Fever, as in the vulgar continual Fever: For in this the Blood, assoon as it begins to boil, presently discharges from its Embraces on the Head or Thorax, a part of the Morbifick Matter, crude as it is, and not digested: Wherefore it would be to no purpose to expect that the Blood should permit its Heterogeneous Particles to be gathered together in its Mass, and then that an Excretory effort arising at set intervals of times, should purge forth the same being subtilised: Nay rather the said Blood, when boiling, Rises not to a great and open flame, but like a fire covered with Turf,

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emits a moiſt Smoak or Breath, rather than a Flame: Yet ſo that from thence by reaſon of the Nervous Juices being preſently depraved in its Craſis, and often by reaſon of the Lungs being ſtuft with a Morbifick Matter, Convulſive or Ptizical Symptoms are particularly preſſing throughout the whole courſe of the Diſeaſe.

I muſt ſet down the Curative intentions according to the various times of the Diſeaſe, and the diverſities of Symptoms that are chiefly preſſing. About the beginning of this Fever, letting Blood ſeem'd to agree in a manner with all: I have often found this Remedy of good effect in Children: For by this means a Breathing place, as it were, is open'd for the Maſs of Blood, which tacitely and covertly lies a boiling, and obtrudes its foul ſmoak on the more noble parts, and conſequently its impure Efflorescencies are withdrawn from the Head and Lungs: Therefore though this ill diſpos'd Fever be ſaid in ſome ſort to be Malignant, yet in as much as the Blood is not apt preſently to be coagulated, but to be fus'd too much, and to diſcharge its Seroſities on the noble parts, *viz.* the Head and Lungs, therefore Bleeding, ſo it be us'd in the beginning of the Diſeaſe, agrees in a manner with all Perſons.

For the ſame reaſon of Curing, Cathartick Medicines, and eſpecially Vomits, are given preſently at the beginning of the Diſeaſe, for theſe do not only empty the Veſſels of Concoction, and ſo withdraw both the firſt, and as it were original fuel of the Diſeaſe, but likewiſe draw Seroſities from the Blood, and ſo cauſe its filth rather to be diſcharg'd in the Stomack and Inteſtines, than on the Head or Lungs. Moreover in as much as the Glands which receive the Lymphæducts, are twitcht and ſtrongly ſhaken by Emeticks, the Superfluities of the Nervous Juice are thereby preſs'd forth into the lower Viſcera, that they cannot offend the Brain, and its Appendix: And for this end, let the Belly ſtill be kept ſoluble by the frequent uſe of Glyſters. In the mean time, while the Blood, being defil'd with the taint of this Diſeaſe, threatens ill to the Brain or Præcordia, it will not be ſafe to attempt any thing with Diaphoreticks or Diureticks, or alſo with ſtrong Catharticks: For theſe ſorts of Medicines, greatly fuſing the Blood, and driving its Seroſities into the places moſt open to receive them, eaſily obtrude on the Brain or Lungs; if at any time they are of a weak Conſtitution, any dreggy filth which is apt to depart from the Maſs of Blood: So in the Youth above mention'd, a Sweat being unſeaſonably rais'd, it was followed by a loſs of Speech: And I have known that Sudorificks, in like manner as Chalybeats, have brought a Conſumption in a Morbid Diſpoſition of the Lungs.

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Therefore Bleeding, and if need be, a Vomit or Purge, *viz.* one of them, or both being preſently ordered at the beginning of the Diſeaſe, the other intentions will be to divert the Morbifick Seroſities of the Blood, which are apt to flow to the Head and Breſt, and to derive them off gently by other ways of Evacuations, and to clear them forth: For this end Veſicatories ought to be applyed on the Nape of the Neck, or behind the Ears, near the Arm-pits, in the Groin, or on the Thighs, or Calves of the Legs, *viz.* ſometimes in this part, ſometimes in that; to wit, that the little Sores made here and there, flowing continually, may plentifully diſcharge the Serum filled with Heterogeneous and Morbid Particles.

Moreover Remedies gently conveying the Serum to the Reins and Urinary paſſages, are often given with good effect; for this purpoſe let Diuretick Apozems and Julapes be ordered according to the following Forms.

Take Roots of Scorzonera, Chervil, Graſs, Eringo's preſerv'd, of each ſix Drams, one Apple ſlic't, Leaves of Burnet, Meadow ſweet, of each a handful, Raiſins an Ounce and a half, burnt Harts-horn two Drams, being ſlic't and bruis'd, let them boil on a clear Fire, in four Pounds of Fountain-water till a third part be conſum'd, to two Pounds of the clear Straining add Syrup of the Juice of Citrons, or of Violets two Ounces, Sal Prunella a Dram and a half, make an Apozeme; the Doſe is from four Ounces to ſix thrice a day.

Or let that Straining be pour'd on fifteen ſweet Almonds blanch, and on the four cold Seeds of each a Dram being bruis'd, make an Emulſion according to Art.

Take water of Dragon-wort, and of black Cherries of each four Ounces, of Scordium compound two Ounces, Treacle-water an Ounce and a half, Syrup of Clove-gilly-flowers two Ounces, Spirit of Vitriol twelve drops, make a Julape.

Let Sal Prunella be given often in a day in ſmall Beer or Whey, from half a Dram, or two Scruples.

Moreover in this Fever *Medicines gently promoting Sweat*, eſpecially ſuch as reſtore the Animal Spirits, and free them from any Heterogeneous Combination, are of excellent uſe: Wherefore either let *Powder of Pearl, or Spirit of Harts-horn, or of Blood be given in a ſmall Doſe twice a day*, viz. *Morning and Evening.*

Let *Glyſters* be injected almoſt daily, and if it ſeems convenient, let a gently looſning Medicine be repeated twice in a week.

Let none but a thin Diet be ordered, *viz.* ſuch as is wont to be in other Fevers; Fleſh or its Broath being wholly forbidden, let the Sick eat only Oat or Barley-broath, let his Drink be ſmall Beer or Whey.

But

But if notwithstanding any Physical provision, the Morbifick Matter gets possession of the Brain or Lungs, or both of them together, so that a failing and disorder of the Animal faculty, or also a violent Cough come upon the Diseas'd, we must consider what is to be done in either state of the Disease, rais'd after this manner to an ill condition; for then the Curative Indications ought to respect a stupor or madness, or the Cough; and at length, if the Disease being upon declining, these Symptoms remit, let appropriated Remedies be given against the Atrophia, it being as the last fortress of this Disease.

1. Therefore if the Morbifick Matter, as it frequently is wont, being brought to the Head, causes there a Stupor or Sleepy affects, Remedies ought to be carefully administred, which draw it to another place, and derive it some way or other from the Head, and likewise such as raise up the Animal Spirits, and make void the impure Combination: Wherefore in this case, let the use of Epispasticks be very much encreast outwardly, let Spirit of Harts-horn be given every sixth hour in somewhat a large Dose, let Blood be drawn again from the Jugular Veins, the Salvatella, or also from the Veins of the Fundament by Leeches. If the affect does not remit, the Hair being shav'd off, let Emollient Fomentations be often applyed to the Head: Moreover let Cupping-glasses, Plaisters and Cataplasms be applyed to the Soles of the Feet; and other ways of administration, such as are vulgarly indicated for Curing a Stupor, ought to be us'd: In like manner, if to the evil or defect of Crisis in this Fever, a Frensy or Mania Supervene, let Remedies appropriated to those affects be administred.

2. But if, together with, or without this Detriment brought on the Head, the Lungs also are injur'd by the Disease, so that the Diseas'd, not yet freed of their Fever, seem to have fall'n into a Consumption or Ptizick, with a troublesome Cough, much and thick Spittle, and that often discoloured, Medicines commonly indicated in such affects are proper; wherefore Pectoral Decoctions, Lohoch's, Syrups, Waters of Milk and Snails distill'd, and other Remedies of this kind, ought diligently to be us'd: The Forms of which are to be found in their above written cases.

Hitherto we have describ'd a continual Fever, for the most part Convulsive, and taking its rise both through the default of the Nervous Juice, and of the Blood: I shall now set before you an example of a Disease, resembling an intermitting Fever, and chiefly radicated in the Nervous Juice.

A fine Woman, of a very tender Constitution, and a weak temper of the Brain and *Genus Nervosum*, and consequently very subject to Convulsive affects, after she had conceiv'd, about the fourth Month of her Child-bearing, upon taking cold, was most sorely afflicted with Althmatick Fits, and likewise with frequent Faintings of the Spirits: But by the use of remedies endowed with a Volatile Salt, she grew well of these Distempers within a fortnight; nevertheless after six weeks were past, an unusual, and very wonderful affect seis'd this Lady.

On a certain morning awaking after her sleep, which had been somewhat troubled that night, she felt in her whole body a light shivering, as tho' the fit of a Tertian Ague were coming upon her: Frequent Gapings and Retchings follow it with a frequent straining to Vomit: Then her Urine, which just before was of an Orange colour with a laudable sediment, became pale and watery, and was very frequently voided, *viz.* every minute of an hour. Moreover about the Loins and Hypochondres, and in other places, pains with light Convulsions passing from one place to another were rais'd. Which kind of Symptoms, being manifestly Convulsive, with the frequent making of Limpid Water continued from the morning almost to the evening: In which space of time a vast quantity of Urine, *viz.* thrice more than the Liquor drank, was made: In the mean while the Heat became not more intense, nor did Thirst seem pressing, nor was the pulse rais'd: In the evening the foresaid affects ceast, and the Urine came again to be of an Orange colour, and in a small quantity; and she enjoyed a moderate sleep during the whole night; and then the next morning the Fit returned near the same hour, accompanied wholly with the like Symptoms, and daily acted over the very same Tragedy.

Going to see this Lady after she had lain ill after this manner for twelve days; I judged that this disease being chiefly rooted in the *Genus Nervosum*, depended on the effervescency and flowing of the Humour that lies in the Nervous parts: to this Breeding person I prescribed Bleeding, and to take twice a day a Powder made of Coral, Pearl, Ivory, and other Cordial things in an appropriated Liquor: morning and evening she took twelve drops of the Tincture of Antimony, the effect whereof I have found to be singular in a too great Flux of Urine: by the use of these things all the Symptoms in a short time remitted.

CHAP.

CHAP. VII.

Of General Convulsions which are wont to arise by reason of a Scorbutick disposition of the Nervous Juice.

SOmetimes universal Convulsions, without Poyson, or a Feverish Miasm, are caus'd by reason of a Scorbutick or otherwise vitious dyscrasie of the Nervous Juice; for the Liquor which lies in the Nerves, and Nervous parts, sometimes falling from its natural and due Crasis, is so much fill'd with Heterogeneous and Explosive Particles, that the Animal Spirits admitting an incongruous combination, some ways accruing to them, are irritated to continual Explosive Convulsions; which kinds of affects of the Spirits are either divided or separate, betwixt which no Communication or dependence happens, *viz.* when many parts of the body are affected together with so many Convulsions peculiar to them, which do not follow each other successively, but are terminated in the same Muscle or Member where they begin: Or secondly, The Convulsive affects which are rais'd together in the whole *Genus Nervosum*, are continual or connected, and being continued by a per petual sort of Vicissitude betwixt themselves, succeed each other, so that the disorderly motions of all the Members through a Mutual Succession when they begin at one part, presently pass into the others. We shall consider the nature of both those convulsive affects, and shall shew what method of Cure is to be us'd in each case.

1. As to the former kind it plainly appears that such affects are not simple, but complicated, *viz.* of a Convulsion and Palsey, for though the Muscles and Tendons are continually infested with Convulsive Motions, yet the Diseas'd being Enervated cannot move strongly any Members, or the whole body: nay to these affects Pains Diffus'd through all the Limbs are added: hence we may infer that the Animal Spirits are indued with a Manifold Combination, *viz.* with particles both Explosive, and Narcotick, and in some sort irritative; so that tho' being always oppress, they fall upon Explosions, yet neither many of them together, by reason of other Particles of another kind mixt with them, nor indeed any of them have a free and lively Explosion wherefore the Impetus of Motion does not reach far, but is al-

ways ſhort and interrupted. A ſtrange inſtance of this affect take as follows.

A nobleman deſcended from Parents and Anceſtors who had been ſubject to evil affects of the Brain, or other Morbid diſpoſitions of the Nerves, about the time that his Age began to decline, firſt was wont to be troubled with a weakneſs, a numneſs, and gentle Convulſions in his Limbs, after having lain long under theſe affects, at length he went to *Bathe* for a Cure, but uſing there the hot Baths too often, inſtead of a cure he got only ſo great an exaſperation of his diſeaſe; that from that time the foreſaid Symptoms did no longer follow him at times, but almoſt conſtantly, *viz.* Convulſive Motions, and Painful Tenſions inceſſantly occupied all his Limbs, nay and each part of his Body, ſo that all the Muſcles together were perpetually Convuls't with repeated Twitchings, and that not without a mighty Torture: the only way of appeaſing which was, that ſometimes his whole Body, ſometimes ſome of its Members were continually exercis'd with a local Motion: for as long as he was awake, he was forc't to be kept moving in his Bed, or in his Seat, or to be carryed in a Coach, or to have his Members preſt or rub'd; for which end Chairs and Beds were made for him with rockers, like Childrens Cradles, in which as he lay, or ſate upright, he was continually rockt to and fro: without which, he was tormented with a cruel Pain, and a violent Tenſion of the Muſcles; the diurnal oppreſſion of this Convulſive affect was followed in the night time, and preſently after ſleep with much more ſevere Symptoms; for he no ſooner awaked, but preſently his whole Body fell a ſhivering, the Muſcles were very much toyl'd with painful Convulſions, and all the Limbs, as in an agony of Death, were wont to be all over in a foul Sweat, which was ſo Corroſive, that the ſheets, unleſs they were preſently waſht, were ſoon eaten and rotted by it, as by Aquafortis: the ſick perſon during this conflict, was tortur'd betwixt Sweating and Shivering for many hours, till being quite tired, a ſleep ſtealing upon him, brought ſome eaſe: but if, as the fit was coming, he was taken out of his Bed, he was better, and ſo he prevented the wonted violence of the Fit: therefore aſſoon as he was awaked from his ſleep, tho' this happen'd within half an hour, preſently to eſcape the torture, he call'd his ſervants, and was taken forth of Bed: being well enough as to his Appetite, he did Eat without naſeouſneſs, nor was his Stomack troubled by what was taken into it, yet he often complained of a Cardialgia; and ſometimes a troubleſome Spitting, with a ſtinking Breath, as tho' he had taken Mercury, moleſted him for many days; any Hot things, as well Food as Phyſick, did not agree with his conſtitution: he dar'd not ſo much

much as Sip of Wine, or Strong-beer: in the firſt years of his Sickneſs he was ſeiz'd with a horrour at the ſight of Fire, afterward becoming weaker, he refus'd to ſit by the Fire, even in the Winter: his Urine was always of an Orange Colour, which if Evaporated on Coals in an Earthen Pot, a Saline filth, amounting to above half the Liquour, fell to the bottom: The Belly being always Coſtive, never depos'd its burthen unleſs irritated by a Medicine or Glyſter: Moreover, beſides the Convulſive Motions, a Baſtard Palſey poſſeſt all the Members of his Body, for he could neither lift up his Hands, nor walk with his Feet; his Tongue faultring brought forth only imperfect words, but ſometimes when on occaſion his mind was poſſeſt with a ſudden Joy, his Spirits and Strength being ſtrangely rais'd, he was able on a ſudden to riſe from his Chair and to walk upright, and skip about without help; which interval nevertheleſs ſcarce laſted a minute of an hour, but the Members faultered afreſh, and were troubled with their wonted Languor and Trembling. As this perſon was ill after this manner above twelve years, he got the advices of the moſt Famous Phyſitians of all *England*, and tryed a great many remedies and almoſt of all kinds, *viz.* Antiparaliticks, Antiſcorbuticks, Drying, and Sweating Dyets, Purges, Cauteries, Baths, Liniments, nay and was twice Salivated but could not be Cured by any of thoſe Methods, wherefore all hope of Cure being laid aſide, for the ſeven latter years of his life he uſed only remedies that had regard to ſome of the chief Symptoms; *viz.* he took thrice a week a Looſening Medicine of Sena and Rhubarb with Correctives, ſometimes in the form of a Syrup, ſometimes of an Extract; he us'd to take every night a Doſe of an Opiate made of temperate Conſerves and Species: Moreover he had a Julap in a readineſs to be taken on occaſion, when the Spirits faultered: He alſo Drank Oat-bear, Alter'd with temperate and Diuretick Herbs: By the uſe of theſe things he paſt at leaſt ſeven years, without any great alteration for the worſe: At length Old Age preſſing upon him and the Diſeaſe together, the Convulſive fits growing more violent, ſeis'd him, not as before when his ſleep was over, but as ſoon as he was warm in his Bed, ſo that he was forc't wholly to forbear going to Bed, and he put off his Cloaths but ſeldom, unleſs it were to change Linnen: Hence tranſpiration being hindred, the Serous and other Filthy Dregs which were wont to evaporate, were fixt on the Lungs, which firſt brought a thick Breathing, afterward an Aſthmatick affect, and laſtly a Mortal Conſumption.

If the reaſons of the foreſaid affects be enquired into: it will appear that all theſe Evils proceeded from the ill Conſtitution of the Brain, and *Genus Nervoſum*, and more immediatly from the

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Dyſcraſy and Default of the Juice that lies in theſe parts.

The reaſon is plain why this Diſeaſe, firſt increaſing by degrees, was ſoon rais'd to a far worſe ſtate by the uſe of hot Baths, for it is manifeſt by experience that hot and ſulphureous Baths very much exalt the Saline, and other Morbid Particles, that abound within the Viſcera, or Humours of Human Body, and ſoon carry them to the higheſt pitch, *viz.* by exagitating them they render them more wildly exorbitant, and force them from the firſt paſſages into the Blood, and thence into the Brain and *Genus Nervoſum*, nay and joyn them together being firſt ſever'd, and lying idle, and ſtir them up to a certain Fermentation: Wherefore ſuch as being hereditarily obnoxious to the Gout or or Stone, have not yet felt any Fits of thoſe affects, after the uſe of hot Baths, very often find that both thoſe diſeaſes are preſently brought to a maturity in them. [You may find the reaſons of the other Symptoms in Dr. *Willis* at large.]

So much for univerſal Convulſions, which for the moſt part being joyn'd to the Paralytick affect, are raiſed at once in many places ſeparately: there remain others which we call continual, *viz.* becauſe being conveyed on a ſudden from theſe parts to others, they mutually ſucceed each other, and force the Members ſometimes theſe, ſometimes others, and often the whole Body to be mov'd involuntarily, and to be bent and agitated divers ways. I ſhall give you an inſtance or two of this affect.

A Beautiful Virgin, tall and thin grown, begotten of a Father obnoxious to very great diſtempers of the *Genus Nervoſum*, about the twentieth year of her Age was afflicted for many days with a very violent and Periodical Head-ach, at length the Winter Solſtice being near at hand the pain of her head remitted, but in its ſtead, a mighty Catarrh ſucceeded, with thin and much Spittle, and with an Ulcerous affect of the Noſtrils, Mouth, and Throat; having undergone the tedioufneſs of this for ſome time, at length by the advice of ſome old Women ſhe drew into her Mouth the ſmoke of Amber through a Tube, and was preſently Cur'd, *viz.* the Catarrh was ſuddenly ſtopt, but preſently upon it ſhe complain'd of a mighty giddineſs, with a Pain of the Head, and a Ringing in the Ears: on the third day the Tendons of the Neck were Convuls't that her head was bent ſometimes forward, ſometimes backward, ſometimes ſideways, and ſometimes it ſtood ſtiff and immovable, in a ſhort time after this ſuch a Convulſive affect ſeiz'd the outward parts of the whole Body, and the Limbs: the Arms and Hands were ſo wonderfully twiſted, that no Jugler or Mountibank was able to imitate their Flections and Convolutions: Her Legs and Feet were forc't awry this way and that, and were made to beat againſt each other, and to croſs each other alternatively

tively, after this manner ſhe was perpetually affected with Convulſive Motions either ſitting in a Chair, or lying in Bed, unleſs when ſhe was overwhelm'd with ſleep; and when ſhe contained her members a little, by much forcing her ſelf, preſently ſhe was ſeized with a difficult, and ſhort Breathing, and with a danger of being Choakt, yet in the mean time the Eyes, Jaws, Mouth, and inferiour Viſcera continued free from any Convulſion: Nor was ſhe troubled with a Vomiting, Rumbling, nor Inflation of the Hypochondres: Moreover her mind held always ſound, and ſhe duly performed the functions of Memory, Underſtanding, and Imagination, ſhe neither ſpake nor did any thing ſhewing want of Reaſon, or Indiſcreetly: but amongſt all theſe ſtupendious evils always uſing Pious and Vertuous expreſſions, ſhe gave an admirable ſpecimen of Chriſtian Patience and Piety: her appetite was ſoon dejected, ſo that ſhe was averſe from all food unleſs very much preſs'd to it; but thirſt continually preſt upon her, ſhe was ſo very weak, ſhe could neither ſtand nor go: Her Urine was of an Orange Colour, very much impregnated with a Saltneſs, on the Surface of which a thin Tartareous Film grew.

Being call'd to this Lady the ſixth day after her being ill, I proceeded in order to her Cure as follows: In the firſt place having made a gentle preparation of the Body, I gave her a Looſning Potion of an *Infuſion of Sena and Rhubarb, with the addition of Yellow Saunders and Salt of Wormwood*, whereby ſhe had twelve ſtools which gave her great eaſe; the day following I drew eight Ounces of blood from her left Arm, every evening I gave her an Opiate of the *Water and Syrup of Cowſlip flowers with the Powder of Pearl*: Moreover once within ſix hours I ordered her a Doſe of Spirit of Harts Horn to be taken with a little draught of the following Julape.

Take Water of black Cherries, Wall-Nuts, and Peony Flowers of each three Ounces, the Antiepileptical Water of Langius two Ounces, Syrupe of Male Peony Flowers two Ounces, Pearl powdred a Scruple, mix them make a Julape. Becauſe ſhe could not bear much Purging, Glyſters of Milk and Sugar were frequently us'd: Beſides Anticonvulſive Liniments apply'd to the Neck and Spine, we ordered Frictions of the Members affected with Woollen Cloths moiſtned in an appropriated Oyl, and warm'd.

By the uſe of theſe things, within ſix days the diſeaſed ſeem'd to be very much relieved; for the Convulſive Motions in a manner wholly ceaſt, ſhe could keep her Members in their due Site, and without Motion, only ſhe was forc't ſometimes by a light Contraction to bow her head gently this way and that: Moreover ſhe was able to ariſe from her Chair and Walk a little, but when ſhe Walk't, ſhe did not go upright, but inclining to one ſide's Par-

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ting from her at that time, I left her in a manifeſt ſtate of Recovery, ſhe ſeeming to be much better: But ſomewhat more then a week after, a boiſtrous North Wind ariſing in the night time, and blowing ſtrongly on the diſeas'd as ſhe lay in her Bed, the window being not well ſhut; preſently upon taking Cold ſhe fell into ſuch a relapſe, that ſhe became not only obnoxious to Convulſive affects, but likewiſe to a Univerſal and Periodical Palſey: For from thence forward her Head and Members being bent and toſs'd again from Morning to the Evening, as before, ſhe was made to Wind, Bend and variouſly Wreſt all her Limbs ſucceſſively; till about night thoſe Motions being wholly appeas'd, a Reſolution or Palſey of the Members enſued, ſo that ſhe could neither move Hand, nor Foot, nor any part elſe, or exerciſe any effort of Motition of the Body, lying in the Bed like a Stone, immovable: But being ſomewhat refreſht with ſleep, about the morning, as ſhe recovered ſome ſtrength of the regular moving Faculty, *viz.* enough, to bend the Arms and Leggs, to and fro, tho' weakly, ſo alſo the Convulſive and Involuntary Motions conſtantly return'd, and continued for the whole day after, which in the evening were again Chang'd into reſolutions of the Limbs.

From what is ſaid it plainly appears, that the ſick Lady lay under a double diſeaſe, *viz.* APalſey, and Convulſions: And beſides the remedies before mentioned a great many others almoſt of all kinds, *viz.* Antiſcorbuticks, Antiparaliticks, Sudorificks, Decoctions, Diſtilled Waters, Spirits, Elixirs, Tinctures, Baths, Liniments with many others were carefully adminiſtred; by the uſe of which the Symptoms were a little remitted, but the diſeaſe was not perfectly Cur'd: The Univerſal Palſey ceaſt in a ſhort while, ſo that ſhe could move her Limbs and bend them to and fro at all times; nay and the involuntary Motions of her Members ſeldomer moleſted her, yet ſhe ſtill continued faint and weak, and as ſhe was of a tender Conſtitution, and inclin'd to a Conſumption, and now become unapt for all exerciſe, the filthy Dregs of the Blood depos'd in the Lungs, by reaſon of her letted tranſpiration, brought a Cough, which dayly growing worſe and worſe, ſhe dyed at length Pthiſical.

Many years ſince I was call'd to a noble Virgin taken almoſt after the ſame, and ſomewhat a worſe manner. For this underwent Involuntary Motions of the Head and Members, *viz.* either Shakings of them, or Bendings this way and that, or Wreſtings of them, returning almoſt in a conſtant Courſe: Moreover ſhe was affected with a very troubleſome, and wholly wonderful Convulſion of the Diaphragm, and Muſcles that ſerve for reſpiration for every minute of an hour and oftener, the Back Bone about the middle of it was made crooked, and at the ſame time

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Breast Springing forward, and the Hypocondres contracting inward, a very Sonorous Sobbing, and the same sometimes doubled, sometimes tripled, but still less and less Shrill came from her; she was wont to continue these Motions, and Reciprocation of noise many hours, so that she was heard throughout the whole house; if at any time a short intermission of this happen'd, presently she was forc't strongly to beat or clasp her arms and hands one with the other, sometimes her Legs and Feet, and sometimes to throw her Head after a most violent manner; by and by to hold her Neck as it were still and immovable. Sometimes in speaking her Tongue was so taken, that she repeated the same word often, nay more than at least twenty times. When the Convulsive Motions were strong in the Exteriour Members she was a little somewhat free from that stridulous Sobbing affect, and she call'd this the space of Intermission and the time of her ease; tho' in the mean while her Head and Members were drawn every way with violent Motions: If at any time she lay on her Left Side, presently an inward Contraction of the right Hypocondre, with a Sobbing happen'd, within a few days, her strength being very much dejected by the assiduity of these affects, she got such a weakness in her Loins and Knees that she could neither stand nor go: The Stomach being affected either with a Languor, or Convulsion threw up all by Vomit that was put into it.

Coming to her the fourth day I gave her a Vomit, after which she Vomited seven times a viscous Flegm, with store of Yellow Choler; but without any relief: The day after I drew six Ounces of Blood from her Arm, whereupon the Blood presently taking violently to the Head, she complain'd very much of a Head-ach and Giddiness; but being Blooded in the Foot, within three days, she was better: She took afterwards remedies appropriated to the Nerves, *viz.* Spirit of Harts-horn, and of Blood, Powders of Shells, Bezoars, Anticonvulsive Julaps, and Electuaries: by the use of these things the Symptoms seem'd somewhat to abate, yet continued still in some Measure according to the Forms before described: After a fortnight, by the advice of some Country Woman, she took six spoonfuls of Blood, drawn from the Ear of an Ass, in a draught of bear, whereupon on a sudden she seem'd to be Cur'd: For the Convulsive Motions presently all ceast, and she past twenty four hours free from them, nevertheless the disease returning shortly upon it with its wonted violence, yielded not easily to that Medicine, nor indeed to any other whatsoever, therefore for the time to come she took Medicines methodically prescribed: She Purg'd gently once in six days, besides she took a Powder made of Bezoar, Pearl and Coral, with the Seeds and Roots of Peony, also the Electuary prescribed

by *Horstius* against these kinds of marvellous Convulsions; and likewise Julaps and Decoctions appropriated to Convulsive affects: Glysters were frequently given: Frictions, Vesicatories and Liniments, were administred with good effect; within a fortnight the Sobbing affect wholly ceast, nay and the rest of the Convulsive Motions, being rendred more mild by degrees, remitted very much; but as she was recovering of those affects she was so troubled with a Catarrh falling on her Throat, that she Spit forth almost continually a Sharp, and as it were Corrosive Spittle, as if a Salivation were rais'd by taking Mercury: Which kind of remedy the event prov'd to be extreamly proper in this case; tho' I wholly forbore using it, because the diseased and her friends were not free to admit of it.

After that this Copious and very troublesome Spitting had continued for many days the disease seem'd to be in a manner wholly Cur'd: So that the Noble Lady, being free from the Convulsive Motions, walk't abroad, and had a good Strength and Stomach: Only she complain'd that at certain times in the day, she was affected on a sudden with a Shivering of her whole Body for about a quarter of an hour: which kind of affect, sometimes also hapning by night, broke her sleep. Within a months space this Symptom also, and likewise the Catarrh, wholly ceast: but afterward she was so afflicted, sometimes with a Sharpness in the Ventricle and Passage of the Æsophagus, sometimes also in the Jaws and Palate, that she fear'd lest those parts, the inner Skin being worn away, would contract an Ulcerous affect: Moreover often in her sleep, and sometimes also waking, she us'd to be troubled with an Incubus. I ordered her a gentle Purge to be given Spring and Fall with the use of Antiscorbutick remedies, and sometimes Chalybeats: Which kind of Method she observed with so great advantage to her, that she has enjoy'd her health for many years, and enjoys it still.

Among many remedies which she took against that Sharpness, and Ulcerous dispostion as it were of the Palate and Æsophagus, I ordered that she should Drink every Morning her own Urine fresh made: This for the most part being very Salt, was wont to give a mighty relief; but at certain times the Urine that came from her was thin, and in a great plenty, which nevertheless was not Salt, but manifestly Acid like Vinegar, after the Drinking of which she found little or no benefit. The reason of the good effect of the one, and not of the other is this: In as much as Saline Particles of a differing state, and not those that are of the same, mutually act on each other, and weaken their strength, therefore the Salt Urine and not that which was Sharp or sour Cur'd the Sharpness of the Throat: And it

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appear'd from hence that the Humour diſtilling on the parts of this Ladies Mouth and Throat was Acid and drew near to the nature of a Vitriolick Vinegar, becauſe the ſmoke of Tobacco receiv'd in the Mouth of the Diſeas'd ſeem'd wonderfully Sweet as it uſes to do in any that taſt Vitriol before.

Ten years ſince I went to ſee the daughter of a certain Nobleman, troubled with Convulſive Motions after ſuch a manner, that ſome thought her obſeſs't with an evil Spirit: This Virgin being about ſixteen years of Age, Fair, and well in fleſh, but begotten of a Father troubled with the Palſey, about the winter Solſtice began to be ill without any evident cauſe: Firſt for ſome days ſhe was affected with a Head-ach and a Giddineſs, though in no ſevere manner; afterward ſhe perceiv'd a Trembling, and a ſudden Contraction in one Arm, and preſently in the other, which kind of Convulſions, returning often that day, ſcarce laſted a moments ſpace: The next day after ſitting by her Siſter in a Chair, on a ſudden ſhe ſtarted up, and made a leap or two, and many others ſucceſſively to many feets diſtance with a wonderful Agility: Then when ſhe was come to the end of the Room, ſhe ſtood for ſome while leaping up in the ſame place, and every time to a wonderful height, when her legs were able to hold Leaping no longer, ſhe fell on the ground and preſently threw her Head ſeveral ways, as though ſhe would have thrown it off her Neck, aſſoon as ſhe ceaſt from this Motion, through her being tired, preſently the ſame fury ſeiz'd her Hands and Feet, that ſhe was forc't to keep theſe members a going in a violent manner, ſtriking them againſt the Walls and Doors, or ſtamping on the Floor: When through Modeſty, or Reverence due to Friends, or Perſons preſent ſhe kept her ſelf from theſe Motions by main force (for ſhe was always preſent to her ſelf and ſpake with ſobriety) preſently the affect being convey'd inward, ſhe was very much infeſted with mighty oppreſſion of the Heart, a Sighing, and very loud Sobbing, then when ſhe gave way to her ſelf, preſently the Rage being conv:y'd to the Muſcles of the outward Limbs, ſhe was forc't either to Leap, or to throw her Head or Arms this way and that in a violent manner, or alſo to run ſwiftly up & down the Chamber, or to ſtamp on the Ground with her Feet: Thus theſe kinds of violent Commotions of the Limbs or Viſcera mutually ſucceeded each other, the Tragedy of the diſtemper returning as it were in a Circle.

Coming the fifth day after this Lady had been ill, I gave her a Vomit of the Infuſion of *Crocus Metallorum*, Wine of Squills, and Salt of Vitriol, after which ſhe Vomited a great ſtore of Æruginous Choler, with a mixture of a moſt Sharp, and as it were Vitriolick Humour: The next day after I drew ten Ounces of Blood from the *Saphæna* Vein: Moreover ſhe took twice a day Antidotes of the

Powders of Precious Stones, Mans Scull, and the Male Peony: by the use of these things seeming to be recover'd, she liv'd for many days after free from the foresaid affects, but after a fortnight, the full Moon coming, she fell into a relaps of the same disease more violent than before, for besides the wonderful Leaps, the violent Contorsions, and Convolutions of the Head, and Members, she was also forc't to Run up & down in a Vehement manner in her Bed Chamber: She took at this time, by the Præscripts of others, Antihysterick Remedies, and Purges at some set intervals of time, but without any relief: Being call'd again, in regard that she was of a Robust habit of Body, and seem'd affected with a mighty raging of the Spirits, I gave her a strong Vomit, after which she Vomited ten times a Choler as green as Verdigrease, with a Flegm as Sharp as *Aqua Stygia*, and was suddenly reliev'd: I gave her afterward, every morning a draught of White-wine Diluted with Black Cherry Water, pour'd on Millepedes bruis'd, and strongly expresst. By the use of these things seeming to be Cur'd, she was perfectly well for a Month, and more: and when afterward she at any time perceiv'd any forerunning signs of a return of the affect, presently by the use of a Vomit, and the same expression of Millepedes, she kept off the Fit: Within three Months she so recover'd her former Health, that she has now lived many years wholly free from such Convulsive affects: But from the time that the Convulsive Passions wholly ceast, she was sometimes troubled about the parts of the Mouth and Throat with a Defluxion of a most Acid Humour, like the distill'd Liquor of Vitriol: Moreover she has sometimes been obnoxious to the longing disease of Maids, sometimes also to a Cough with a discolour'd Spittle threatning a Ptizick, which nevertheless were easily Cur'd by remedies usual in the like cases.

Whilst I was writing these things, I went to see a Noble Virgin, who was troubled with Convulsive affects of another kind, and those Universal, and no less Admirable: This about the eighteenth year of her Age, being of a fresh Colour, Handsome, and before sound enough, now happening unawares to incur the danger of being infected with the Plague, it being rife hereabouts, fell into a Panick Fear, with frequent Swooning Fits, the night following she underwent such Failings and Disorders of the Spirits that she seem'd even ready to Dye. But having past that evil with much ado, she had afterward every day Convulsive Fits, though returning first at uncertain hours, and in several forms: But within a short time the accesses of the disease becoming regular, they return'd constantly twice a day, *viz.* at eleven of the Clock in the forenoon, and at five in the afternoon, that no intermitting Fever keeps its periods more exactly, nay and all

all the circumſtances of the Fit happen'd daily after the ſame manner.

When ſhe had been thus ill three weeks, I was call'd on a certain day, that I might obſerve all the Symptoms, and the whole form of the diſeaſe: Riſing from her Bed at ten a Clock in the Morning, ſhe was well, and carryed her ſelf ſo well in her countenance, walking, and diſcourſe, that no man would have ſuſpected that any thing ail'd her: At eleven a Clock ſhe began to complain of a Plenitude, and as it were Inflation in the Brain, and a Deadneſs of the Spirits with a light *Scotomia*: by and by ſhe felt in the left Hypocondre a mighty beating, and Springing as it were of a live Animal: I plainly felt this Motion by applying my hand to her ſide, then a Retching and great Crying followed, whereupon ſhe was preſently led to Bed, and given to be held by a maid ſervant ſitting on the Bolſter: This perſon clapping her Arms about the middle of the diſeas'd, held her very hard in her Lap, during the Fit. Moreover ſervants were at hand, and relations ſtanding about her, who ſometimes held her Hands and Arms, ſometimes preſt down her Belly and Hypocondres which riſe to a mighty Bulk, ſtill forcing upwards: The chief Symptoms of the diſeaſe, which being rais'd by turns, divided in a manner the whole Fit, were theſe two, *viz.* Sometimes violent Convulſions of the Viſcera infeſted her, ſo that the Abdomen riſing to a mighty Bulk, withſtood the hands of ſtanders by, preſt againſt it, that it could not be kept down, and withal the Præcordia being drawn upward, the Motion of the Heart and Blood was in a manner ſtop't: For which ſpace of time the Virgin hanging down her head, with a weaken'd, and no Pulſe as it were, lay Speechleſs and almoſt inſenſible: After two or three minutes of an hour theſe Fits ceaſt: And then the Sick raiſing her ſelf, look't round her chearfully, and for ſome time converted the Impetus of the diſeaſe into Diſcourſes and Songs, both which ſhe uttered moſt Pleaſantly and Elegantly above her Natural diſpoſition; ſhe paſt ſuch Sayings and Scoffs on all perſons about her, that there is nothing in any Comedy to be met with more facetious; then ſhe would Sing moſt Sweet and Pleaſant Tunes of Harmony, ſuch as neither any perſon elſe could Sing, or herſelf at another time: After that ſhe had thus paſt about ſix or ſeven Minutes of an hour, in Jeſting and Singing, ſhe fell again into the Convulſions of the Viſcera and Hypochondres, and the loſs of Speech as before: And theſe remitting in a ſhort time, and the Impetus of the Spirits flying back from the inferiour Nerves to the Brain, ſhe gave her ſelf again to the pleaſantryes of Talking and Singing. When at any time ſhe diſcourſt with the ſtanders by, if any thing that was Sharp or Ignominious were replyed by them, ſhe fell into

into more Violent and Lasting Convulsions of the Bowels: After this manner she uses to be troubled with an alternate affect of the Viscera and Brain for about the space of an hour: Then the Fit drawing toward an end, the Convulsions of the Bowels becoming more gentle, return'd three or four times with very little intermission: Afterward these wholly ceasing, the Impetus of the disease passes into the outward Members, whence presently it wholly vanishes: For the Arms and Legs undergo contractions and twitchings for a minute of an hour, and presently after the diseased rising up, comes off from her Bed, and is free from all Convulsion till a new Fit returns, nay and having an indifferent good strength, walks up and down the house, and during the interval of the affect, cheerfully performs the usual Offices of Life, still excepting that her Stomach being weak, loaths food during the day time, in the evening after the second Fit of the disease, she eats a little supper.

About the beginning of this sickness the Convulsions of the Bowels were much more violent, and she lay Senseless with them, and during their intervals she would talk absurdly, Sing Songs out of tune, and fall out a Laughing, or Crying, without any ground of reason: But at length the Animal Spirits being forc't into lasting explosions, perform'd them so regularly, sometimes this way, sometimes that, as it was most proper, that they seem'd to be done in some sort by the moderation and command of the will.

After I had been again to see this Lady, having lain under these periodical Fits for many weeks, I ordered that three hours before the second Fit, ten Ounces of Blood should be drawn from the Vein of her foot, whereupon the Fit, expected in the Evening, wholly left her, nor did it ever return afterward: But the other Fit observing its ancient course return'd daily, till upon Bleeding a little before its coming, the Patient was free of it that day, which nevertheless returning the next day after followed her for many months according to the same form: In the mean while, because the winter cold was very severe, she delai'd for some time the use of Remedies: But as the Spring came on the noble Lady being brought to *Oxford* was cur'd by the following Method.

In the first place I gave her this Purge, and took care for it to be repeated every sixth or seventh day.

Take Sulphur of Antimony six Grains, Mercurius Dulcis a Scruple, Rosin of Jalap four Grains, Ginger six Grains: Let them be bruis'd together on a Marble, then adding Conserve of Violets a Dram, make a Bolus. It was wont to make her Vomit twice or thrice, and to give her three or four Stools: Her Menses constantly flowed from her at set

times

times in a plentiful manner: Wherefore her Blood seeming to be in great plenty and hot, in the middle time betwixt the monthly periods I ordered Bleeding twice or thrice: Moreover on all those days that she did not Purge, she took four Pills of the following Mass, Drinking after it a little Draught of the Julap beneath prescribed.

Take Roots of Male Peony half an Ounce, of Virginia Serpentary, Contrayerva, and Bastard Dittany of each two Drams, Mans Scull prepar'd a Dram and a half, Elks Hoof a Dram, red Coral prepar'd, Pearl Powdred of each a Dram, Salt of Wormwood two Drams, Salt of Coral a Dram, with a sufficient quantity of Syrupe, of Male Peony flowers make a Mass.

Take the Waters of Male Peony Flowers, Black Cherries, and Wallnuts of each four Ounces, the Antiepileptical Water of Langius *two Ounces, Syrup of Peony Flowers an Ounce and a half, Castoreum tyed in a knot and hung in the Glass a Dram, mix them make a Julap.*

When she began to loath the Pills, omitting them, she took twice a day, *viz.* early in the morning, and late at night, about a Scruple of the following Powder in a spoonful of the Julap, Drinking after it four or five spoonfuls of the same.

Take Bezoar Stone of both kinds, White Amber, Pearl prepar'd, Red Coral of each a Scruple; Mans Scull two Scruples, Roots of Virginia Serpentary, Seeds of Rue of each half a Dram, mix them, make a Powder, let her take a Scruple Morning and Evening with a Dose of the Julap above prescribed.

Afterward when this also began to nauseate her, she us'd Pills, or also *Elixir Proprietatis*, sometimes also Spirit of Harts-horn for many days: afterward at long run upon taking that Powder daily for some space she began to find help.

In the mean while that this Method of Cure was followed; her Hair being Shav'd off, her Head was cover'd only with a thin Dress, she wore the Hysterick Plaister with a mixture of Galbanum on the Abdomen: She drank for her ordinary drink a Bochet of Sarsa and China with the Roots of Male Peony, and other appropriated things infus'd and boil'd in Fountain Water: Within a Month the Fits remitted a little: Afterward becoming more mild by degrees and lesser, at length they ceas'd in a manner altogether, unless that near the time of her *Menses* she was wont to be troubled with an assault or two of that disease: Moreover she was troubled almost with a constant Giddiness and a loathing of Meat; in the midst of Summer she drank *Astrope Waters* for six weeks, and grew perfectly well.

As to the way of Cure to be us'd in general for such Marvellous Convulsions, it is not an easie thing to assign Remedies equal to so Herculean a Disease, or a certain method of its Cure con-

confirm'd by frequent experiments : For beſides that caſes like thoſe ſeldom occur, we may likewiſe obſerve, that the ſame Medicine which did good to this ſick perſon at one time, gave not the leaſt relief to another perſon, or the ſame, when given at another time, the reaſon of which ſeems to be that the cauſe of the Diſeaſe ſeems to conſiſt in the Diſcraſy of the Nervous Juice: Which liquor is not always perverted after one and the ſame manner : But from the manifold combination of the Salts and Sulphurs, gets a Morbid diſpoſition of a various kind and condition, and often changes it : Wherefore in thoſe difficult affects, we muſt not preſcribe vulgar Medicines, taken from Apothecaries Shops, but Magiſterial ones, as occaſion requires, according to the appearances of the Marvellous Symptoms. A Gentle Vomit, a Purge, and Bleeding ought in the firſt place to be us'd, and ſometimes to be repeated, as it ſhall ſeem convenient. And as to Specifick Medicines, and ſuch are appropriated in thoſe caſes, ſince the chief Indication will be to amend the Craſis of the Nervous Juice, we may try a great many things and ſift their vertues from the effect : Therefore we may try what things endued with a Volatile or Armoniack Salt will do : For this purpoſe let the Spirits and Salts of Harts-horn, Blood, Soot, the Flowers and Spirits of Sal Armoniack be taken : Theſe giving no relief we muſt come to Chalybeats; let the Tinctures and Solutions of Coral and Antimony be given : which ſort of Medicines muſt be given in ſuch a Doſe, and form, and for ſo many times, that ſome alteration may be made by them in the Blood and Nervous Juice : Again, if theſe have not ſucceſs we muſt proceed to *Alexipharmicks*, which are good againſt Poyſon and a Malignity gotten into the Humours, *viz.* of theſe we muſt order Decoctions, Deſtillations, Powders, Conſerves, and other Preparations of Vegetables, and we muſt variouſly compound them the one with the other, and adminiſter them ſeveral ways : It ſeems likely that thoſe ſorts of Medicines which being inwardly taken are wont to do good to ſuch as are bit by a Viper, or by a Mad Dog, and likewiſe againſt Wolfs-bane, and Napellus, may alſo be of uſe in the above mentioned Convulſions : We may here, after the example of *Gregor Horſtius* in his Tracts of the Malign Convulſive diſeaſe, preſcribe alſo Magiſterial Remedies in form of a Purging Electuary, alſo of a Powder, and Convulſive Antidote for theſe Marvellous Convulſions, and variouſly Compound the ſame of Simples, partly Alexipharmical and partly Antiepileptical.

CHAP.

CHAP. VIII.

Of the Affects which are vulgarly call'd Hysterical.

IF at any time an unusual sort of Sickness, or of a very Secret Origine occurs in the Body of a Woman, so that its Cause lies hid, and the Therapeutick Indication be wholly uncertain, presently we accuse the evil influence of the Womb (which for the most part is guiltless) and in any unusual Symptom, we cry out that there is somewhat Hysterical in it; and consequently the Physical intentions and the uses of Remedies are directed for this end, which often is only a starting hole for Ignorance.

The passions which are wont to be rank't in this number are found to be various and manifold, which seldom agree in divers Women, or happen wholly after the same manner: the most common of them, and which are vulgarly said to Constitute the formal state of an Hysterick affect, are these, *viz.* A Motion in the lower part of the Belly, and an Ascent as it were of some round thing there, then a Belching or Straining to Vomit, a distention of the Hypochondres and a Rumbling with a Belching forth of Wind, an uneven and for the most part a letted Respiration, a Suffocation in the Throat, a Giddiness, an Inversion, or Rotation of the Eyes, often Laughing, or Weeping, a Talking Idly, sometimes a Speechlesness and Immobility with an obscure or no Pulse, and a Cadaverous aspect, sometimes Convulsive Motions rais'd in the Face, and Limbs, and sometimes in the whole Body: But universal Convulsions seldom happen, and not unless the disease be raised to it's worst state, for the Tragedy of the Fit is acted through for the most part without any contraction of the Members only in the Belly, Breast and Head, *viz.* in one of them, or successively in all. Women of all Ages and Conditions are obnoxious to these affects, to wit Rich and Poor, Virgins, Wives, and Widows: I have observed those Symptoms in Girls before the time of Puberty, and in old Women after their *Menses* ceast to Flow, nay and men are sometimes troubled with such kind of Passions, instances of which are not wanting.

The cause of these Symptoms must not be imputed to the Ascent of the Womb, and to vapours rais'd from the same; nor to the Impetuous rushing of the Blood into the Lungs, as the Learned *Highmore* has Judg'd: But we say that the affect call'd Hysteri-

cal, chiefly, and primarily is Convulsive, and depends principally on the Brain and *Genus Nervosum* being affected, and is produc't wholly by the explosions of the Animal Spirits, as other Convulsive Motions. And whatever disorder or irregularities happen else about the Motion of the Blood, they are only secondary and depending on the Convulsions of the *Viscera*. The way of the difference whereby the kinds of this disease both differ from each other, and from the other Convulsive affects is taken from the various Origine, and chiefly from the extension of the Morbifick Cause: for the Origine of this, as of many other Convulsive affects sometimes resides in the Head, the Womb being wholly without fault: Though sometimes this affect happens through the fault of the Womb, and sometimes through that of other parts: As to the extension of the Disease, from whatever Origine it proceeds, for the most part it chiefly affects the Interiour Nerves, to wit those that particularly regard the Viscera and Precordia and their appendixes, and chiefly troubles the Spirits lying in them: Sometimes also, though rarely, the Spirits that preside in the Exteriour Nerves and likewise those in the Brain and *Cerebellum*, are involv'd in the same affect.

As to the Morbifick Matter, or Explosive Combination, which, accruing to the Spirits within the Brain, and deriv'd with them into the Processes of the Nerves, often is the cause of the affects, which are vulgarly call'd Uterine, or of the Mother: We say this to be Heterogeneous Particles sent from the Blood, as in other kinds of Convulsions; and which are wont to be made to cleave to the Spirits that pass into the Origines of the Nerves, on two chief occasions, *viz.* either through the fault of the Spirits themselves, or through the great force of the Matter: instances of both kinds every where occur: Through the fault of the Spirits themselves as when through a sudden Passion, suppose of Fear, Anger, Sadness, they are very much Troubled and forc't into Irregularities; through the Exorbitant force of the Matter, as in the evil *Crises* of Fevers, also in any Malignant, and Scorbutical, and other Chronical affects of an ill Determination: these causes are much upheld and promoted by an ill or weak Constitution of the Brain and *Genus Nervosum*, whether it be hereditary, or acquir'd by an ill dyet, hence Women are more obnoxious to Convulsive affects than Men, and those one more then another.

Tho' these they call Hysterical affects very often arise from the Brain, yet sometimes they are rais'd by a cause beginning either in the Womb, or in other of the *Viscera*; and this either by reason of a solution of continuity, through a Tumor or Ulcer,

or

or Stimulation of the part; or by reaſon of the obſtruction of the Nervous Juice in its Circulation; thus when ſome accuſtomed evacuation, whereby the ſuperfluities of the Nervous Liquour were wont to be diſcharged, is ſtop'd, as upon the ſudden ſtopping of Iſſues, or drying up of old Ulcers without Purging, many have fallen into Convulſive affects, which ſometimes alſo happen to Virgins and Widows through a retention of the Seminal humour, which ought to be Voided its proper way: And ſometimes the Nervous Juice regurgitates toward its Origine, becauſe its paſſage is ſomewhere ſtop't by a Cancrous or Scirrhous Tumour. To illuſtrate our doctrine of the, vulgarly call'd, Paſſions of the Womb; I ſhall now give an inſtance of a perſon troubled with them.

A Renowned Lady, extreamly beautiful, and endowed with an excellent temper of mind and manners, lately lived in theſe parts, who for many years was obnoxious to Convulſive affects, ſhe having contracted this valetudinary diſpoſition from her Birth, or Hereditarily, and having found in herſelf theſe fruits of the morbid root almoſt every fourth year of her Age; but eſpecially as often as ſhe conceived with Child (as ſhe often had, and undergone frequent Abortions) ſhe was wont to be extraordinarily troubled with Convulſive paſſions, in a manner Hyſterical: For preſently upon the ſtopping of the Menſes, the Heterogeneous Particles being convey'd to the Brain, and *Genus Nervoſum*, brought violent Fits of the diſtemper.

After that ſhe had laſt conceived, in the firſt Months according to her ancient wont, ſhe was often troubled with Convulſive affects, about the ninth week of her being with Child, upon taking Cold, ſhe fell into a dangerous Fever, in which very acute Pains ſorely infeſting her in the Loins, and about the lower part of the Belly, ſeem'd to threaten an Abortion: But thoſe Pains, as it appear'd at laſt, being rather to be judg'd of the Colick, proceeded from a Sharp humor, falling from the Brain into thoſe parts by the Ductus's of the Nerves; for about the declining of the Fever, that matter being convey'd elſewhere, a Diarrhæa, Pains of the Feet, and a Bliſtering as it were enſued.

As ſoon as this Lady grew well of her Fever, and Pains, the Convulſive affects returned, for every morning as ſhe awaked from her ſleep, ſhe was wont to undergo violent Contractions and Convulſions about the parts of the Mouth and Face, and alſo in the Arms and Legs, which Symptoms doubtleſs aroſe from the Serous filth heap'd together in the Head about the Origines of the Nerves; and deeply Imbib'd by them during the ſleep, together with the Juice that paſſes in them; and when afterward the ſame matter was carryed again by the conveyance of the In-

teriour Nerves, into the Plexus's of the Meſentery, and the Loins, moſt violent Pains of thoſe parts, and likewiſe Fits as it were Hyſterical ſorely infeſted her.

For thoſe Convulſive Motions of the Face and Members ceaſt in a ſhort time, yet ſhe continued ſtill Weak and Infirm, with a Pale Countenance, Trembling as ſhe went, and having a mind to no Food but ſuch as was improper, and to hot Liquors: about the end of the third Month, at which time ſhe uſed conſtantly to Abort, her *Menſes* broke forth, which paſſing from her for two or three days together, with pieces of broken Membranes, ſhe expected the Abortion: But the Flux ceaſing, Pains, like thoſe of a perſon in Labour, aroſe in the Abdomen and Loins as before, and miſerably tormented her day and night for a week: At length having us'd a Bath of Emollient Herbs, and then being put to bed to ſweat, ſhe was delivered of the burthen of her Womb: the Conception thus paſſing from her with a mighty torture was as a Pea-hens Egg in bigneſs and figure; the outward coat of this was ragged and broken; the inward coat remaining whole, contained about half a pound of clear Water, and nothing elſe: And no rudiments, of a Fætus that was form'd, or about to be form'd, did appear: Afterward for four or five days the Lochia flowed from her with ſome pieces of Membranes: Mean while Pains troubled her with their wonted violence: And in regard that after a week was paſt, they did not ceaſe of their own accord, at length remedies were deſir'd for appeaſing them.

For this end in the firſt place, Liniments, Fomentations, Baths, and Glyſters were frequently adminiſtred: And Medicines cleanſing the filth of the Womb, on which the cauſe of the whole diſtemper was charg'd, were inwardly taken: Upon the uſe of the former, ſhort intermiſſions of the Pains followed: But now and then the affect returned and was mighty tedious: Nay and within three weeks, the diſeaſe growing much worſe brought many other horrible Symptoms along with it: For beſides the Pains in the Abdomen and Loins, which grew daily more violent, ſhe was now troubled likewiſe with a great torture in her Back, Neck, Shoulder Blades, alſo in the Arms and Leggs, and that more ſeverely as often as ſhe grew warm in her Bed: Moreover ſhe was afflicted with a frequent Giddineſs, a Vomiting and Nauſeouſneſs, and often in a day with vehement Convulſive Fits, *viz.* Firſt a great heavy thing ſeeming to Aſcend in the lower parts of the Belly, preſently raiſed up the Belly with violence: By and by, reſpiration being ſtopt, ſhe became ſenceleſs with a Cadaverous aſpect: After that ſhe had lain thus dead, as it were, for three or four minutes of an hour, ſhe was wont to ſtart up

on

on a ſudden, that ſhe could ſcarce be kept down or held by perſons preſent: Then followed violent contractions and diſtortions in all the parts of the Mouth and Face, and in all the Members of the Body. Theſe Symptoms were judg'd really Hyſterical, becauſe the noble Lady had ſo lately Aborted.

But conſidering all theſe things, I was at length of this opinion, That the cauſe of both Fits, *viz.* the Paining, and Convulſive, depended wholly on the evil affects of the Brain and *Genus Nervoſum*, without any fault in the Womb, to wit, that the ſharp humour heapt together within the Brain, deſcended thence, by the paſſages of the Nerves, into parts very remote, and lying in the Membranes and Fibres, and fermenting with the humour coming to it from the Maſs of Blood, irritated them very much, and caus'd violent pains: then afterwards, when the heterogeneous and exploſive Particles, admitted into the Brain with that Humour, and entring the Ductus's of the Nerves, joyn'd with the Spirits, thereupon the Convulſive diſpoſition, now and then breaking forth into violent Fits, was caus'd, as it will by and by appear more at large.

Directing my curative intents according to this Ætiology, I ordered the ſick Lady, at the time ſhe was extreamly ill, that Blood ſhould be drawn from the Saphæna Vein, That a gentle Purge ſhould be given her within two days, and that it ſhould be repeated once or twice a Week: Alſo on other days I gave her, Morning and Evening, Spirit of Harts-horn; and at other hours, twice or thrice in a day, Powder of Pearl and Crabs-eyes, with a Doſe of the following Julape.

Take Water of Snails, Magiſterial Water of Earth-Worms, of each three Ounces, Water of Saxifrage, and of Black-Cherries, of each four Ounces; Hyſterick Water, an Ounce; Syrup of Coral, an Ounce and a half; Tincture of Caſtoreum, a Dram: mix them.

She us'd frequently a Bath of freſh Herbs when neceſſity required it; ſhe took Opiats always with good ſucceſs: Veſicatories were applied to the inward part of each Thigh, and to her Neck. Moreover Fomentations, Liniments, Glyſters, Cupping-glaſſes, Sneezing-powders, and many other ways of Adminiſtration were preſcrib'd, according to the exigency of Symptoms.

After this method of Curing uſed about fourteen days, the noble Lady, being very much relieved, was wholly without the Convulſive Fits; nay, and the pains of the Bowels and Members, and other Symptoms, being very much mitigated, gave us a very fair hope of a ſpeedy Recovery; but after this, partly by reaſon of an ill Dyet, to which the Diſeaſed, upon never ſo little an amendment, always indulg'd herſelf, but eſpecially by reaſon of a ſudden paſſion of terrour or ſadneſs, which a ſevere accident happen-

happening within her own Houſe, had rais'd, falling into a Relapſe, the Diſeaſe was preſently brought to a much worſe condition; for both the Convulſions, and Pains troubled her in a more violent manner, nay, and the Stomach, being ſtirr'd up in a manner with a continual Vomiting, neither admitted Food nor Medicines: ſhe took Aſſes Milk for ſome days, with ſome Benefit; yet in regard it turn'd to Choler in her Stomack, and gave her ſome offence, it was ſoon left off. At length, in deſpite of all Remedies preſcrib'd with all diligence by the advice of many Phyſitians, the noble Patient languiſh't daily more and more, and by degrees drew near to Death. Two days before her Deceaſe, the pains of her Belly and Loyns remitted very much, and becoming more chearful than her wont, ſhe had ſome hope of her Recovery; but in the mean while ſhe complain'd of a pain and a mighty oppreſſion of her Head; and falling into a profound Sleep, about the beginning of the Night, upon her awaking, ſhe fell into a very horrible Convulſive Fit, which preſently paſt into a mortal Apoplexy, for becoming inſenſible and ſpeechleſs, ſhe departed this Life within twelve hours. The Body of this perſon being open'd after her Deceaſe, the Womb was found wholly without fault, tho' many of the *Viſcera* were preternaturally diſpos'd: in the Meſentery, about the midſt of it, where it is fixt to the Back, and contains great Plexus's of the Nerves, a lax ſubſtance, and blown up as it were with many Bladders, was ſeen, it equalling a hands breadth in extent: opening this place, I found no Humour in it, but only that the Membranes were ſeparated from each other, and that nothing was included in the ſpaces betwixt them but a Wind, which Separations doubtleſs were cauſed by the Convulſions and Exploſions of the Spirits, ſent from the Head into thoſe Plexus's: and as to thoſe pains in the Belly, and the aſcent of the great heavy thing, as it were, and the Inflation of the Abdomen in the Convulſive Affects, it is not to be doubted but the Seat of the morbifick Cauſe lay hid in that part of the Meſentery.

As to the method of Curing to be us'd in the Paſſions vulgarly call'd Hyſterical, ſince the greateſt part of the Symptoms of this Diſeaſe are Convulſive, it is thence plain that anticonvulſive Remedies, ſuch as above written, are chiefly indicated. Nevertheleſs, ſince theſe Affects very often happen to the Female Sex, in which the *Menſes*, and other accidents of the Womb, are moſt commonly taken in as a part of the Morbifick Cauſe; therefore Medicines having regard to various diſpoſitions of the Womb ought to be added to the former, and be ſundry ways complicated with them. The Therapeutick Indications are either Curatory, to be us'd in the Fit, or Preſervatory, which being

ing, proſecuted out of the Fit, remove the cauſe of the Diſeaſe, and prevent its Acceſſes. As to the former, if the Fit be but ſmall, let it paſs off of its own accord, without any farther perturbation of the Spirits; but if it ſo ſorely preſſes that it is needful to give aid to Nature, as being greatly oppreſt, let this one thing be endeavoured, That the Spirits being made free from the Embraces of their Heterogeneous Combination, remit of their Diſorders and Exploſions: For this end it is very uſual in the firſt place to apply to the Noſtrils ſtinking and ſtrong-ſmelling things, the effluvia's of which repreſs and reduce to order the Spirits, which are grown too wild and apt to make exorbitant efforts, nay and diſcuſs their Heterogeneous Combination, and often wholly exterminate it. *Aſſa Fœtida*, *Caſtoreum*, *Galbanum*, tyed in a fine Linnen Cloth, and held to the Noſtrils, are proper; alſo the Feathers of Partridges, or old Shoes burnt, or Sulphur kindled: moreover the Spirit and Oyl of Soot, or of Harts-horn, often give help; tho' I have known that theſe kinds of Suffumigations have prov'd very offenſive to ſome Women, and have encreas'd the Fit; it's probable that ſometimes they irritate the Spirits too much, and force them into greater diſorders. As ſtinking things held to the Noſtrils, ſo the like being pour'd into the Mouth, often give help; wherefore we often give with good ſucceſs, to Hyſterical perſons, the Tincture of *Caſtoreum*, Solutions of *Aſſa Fœtida*, and of *Galbanum*, alſo the Spirits of Harts-horn and of Soot, with appropriated Waters.

Take Spirit of Harts-horn, from twelve drops to fifteen or twenty, let them be taken in a little Draught of the following Julape.

Take Water of Penny-royal and Mugwort, of each four Ounces, Water of Bryony compound, two Ounces; Caſtoreum tyed in a Nodulus, and hung in the Glaſs, half a Dram; double refined Sugar, an Ounce; Mix them.

Take Tincture of Caſtoreum, from a Scruple to half a Dram; let it be taken in a little Draught of Small-beer. *Take* Aſſa Fœtida, *or* Galbanum, *two Drams; let them be diſſolved in Spirit of Wine till a red Tincture be extracted: the Doſe is a Scruple in two or three Spoonfuls of Water of Featherfew.* *Riverius* greatly extols that of *Solenander*; *Take Muſk, Dragons-blood, of each a Scruple; let more or leſs be taken in three or four Ounces of Water of Navews.* Johannes Anglicus *commends the Seeds of Parſnips, or of Columbines in Wine, or an appropriated Water, as moſt certain Remedies.* If the Fit, continuing a long time, renders the Perſon ſenſeleſs, or without any Pulſe, let ſmart Clyſters, as of the Roots of *Briony*, with Carminatives boil'd with them in Water, be injected; let Frictions be us'd to the Legs and Feet; and if we muſt proceed

ceed to ſtronger things, let Cupping-glaſſes be applied to the Belly or Groin, nay and let ſneezing be often provok'd: it is good for ſome to give them, in the midſt of the Fit, a Draught of cold Water, either ſimple, or in which Camphire has burnt.

The preſervatory Indication comprehends theſe three chief intents, *viz.* Firſt, To take away, or to drive to ſome place elſe, the impurities of the Blood, which are apt to be diſcharg'd on the Brain and *Genus Nervoſum.* Secondly, To fortifie the Brain, and ſo ſtrengthen the Spirits in it, that they either admit not at all the Heterogeneous Combination, or readily ſhake it off. Thirdly, to amend whatſoever is amiſs in the Womb, and contributes to the Convulſive Diſpoſition.

1. The firſt Intention is perform'd by Purging and Bleeding, and other common ways of Cleanſing and Purging the Blood and Humours. If there be room for a Vomit, I judge we muſt always begin with that, eſpecially in Cacochymical perſons, or ſuch as are troubled with the longing diſeaſe, in whom a mighty load of Viſcous Phlegm, ſticking in the Folds and Coats of the Stomach, hinders the vertues of other Medicines: Within a few days after the Vomit, (unleſs ſomewhat indicates the contrary,) let Blood be drawn, in Women of a hot temperament, preſently from the Arm, and afterward, if need be, from the Foot, or from the Veins of the Fundament, by Leeches; but in Bodies troubled with obſtructions and leſs hot, let Blood be drawn more ſparingly and rarely, and only in places ſeated below the Womb. After theſe evacuations (provided always that they are indicated) being duly perform'd, let a Purge be given once within ſix or ſeven days according to the forms following.

Take Pil. Fœtidæ Majores a Dram and a half, Roſin of Jalap twelve Grains, Tartar Vitriolated, Caſtoreum of each a Scruple, Ammoniacum diſſolved in Hyſterick Water what ſuffices, make twelve Pills for three Doſes. (*Or*)

Take Roſin of Jalap eighteen Grains, Calomelanos a Dram, Caſtoreum a Scruple, make a Powder, divide it into three parts for three Doſes, give it in the Pap of a boil'd Aple, or in Conſerve of Borage: To perſons of a Hot temperament a doſe of our Extract, or Loofning Syrup may be properly given: For the revulſion of the Morbifick matter from the Head an Iſſue in the Leg, or Thigh, and ſomtimes Veſicatories, Ligatures and Painful Frictions are wont to be us'd. Nor muſt we only have regard here to the cleanſing of the Blood, and to the Revulſion of its ſuperfluous Dreggs from the Head, but likewiſe to the alteration of its Liquor, and the reducing of it to its due Craſis: Wherefore in certain Hyſterical perſons Chalybeats prove beneficial, in others Mineral Waters or

Whey,

Whey, in some the use of Hot Baths are wont to do mighty good.

2. The second intention, *viz.* the rectifying of the Brain, and of the Animal Spirits, is perform'd by Cephalick and Particularly by Anticonvulsive Medicines, and let them be carefully given almost every day when there is no Purging, or Bleeding: There being various kinds and ways of Administration of such Medicines, I shall here give you some of the more choice forms of them.

Take Fæcula of Briony, Assa Fœtida, Castoreum, of each a Dram, Salt of Coral, Amber, and of Jupiter of each half a Dram; Galbanum dissolv'd in Hysterick Water what suffices, make a Mass; the Dose is from half a Scruple to a Scruple, Morning and Evening, Drinking after it a Dose of an appropriated Liquor.

Or, Take seeds of Wild Parsnips and of Nettles of each two Drams, Vitriol of Mars a Dram, extract of Gentian and Feverfew, of each a Dram and a half, with a sufficient quantity of Syrup of Mugwort make a Mass, let it be taken to half a Dram after the same manner.

If the form of a Powder be more grateful. *Take roots of Virginia Serpentary and Contrayerva, of each a Dram and a half, Coral prepar'd, Pearl, White Amber of each a Dram, mix them, make a Powder, the Dose is from a Scruple to half a Dram Morning and Evening with an appropriated Liquour.*

Let Opiates be made after this manner. *Take Conserves of the Flowers of Lillies of the Valley, Male Peony, and Betony of each two Ounces; Peony Seeds, Red Coral prepar'd of each two Drams, Powder of Bastard Dittany a Dram and a half, Salt of Wormwood two Drams, with a sufficient quantity of Syrup of Citron Pills, make an Electuary. The Dose is Morning and Evening the quantity of a Nutmeg. After the same manner to the Poor, let Conserves of the Leaves of the Tree of Life, or of the Leaves of Rue be given twice a day.*

The Liquours appropriated to Hysterical affects, and to be Drank after the foresaid Medicines are either Distilled Waters, which may be taken by themselves, or with others in the Form of a Julape, or they are Decoctions, or Tinctures and Infusions.

Take Water of Mugwort and Pennyroyal of each half a Pound, Hysterick Water four Ounces, Tincture of Castoreum half an Ounce, Syrup of Coral an Ounce and a half mix them; the Dose is from an Ounce to an Ounce and a half with any of the Medicines above prescribed.

Take Leaves of Penny-royal, Feverfew, both Southernwoods, Calamint, Nep, both Horehounds, of each a Handful; Briony Roots four Ounces, Parsnip-Seeds two Ounces, being Slic't and Bruis'd, pour to them of White-wine or Sider six pounds distil them according to Art.

Take roots of Male Peony, Angelica, Valerian, of each half an Ounce, Leaves of Mugwort, Ground Pine, Calamint, Peny-royal, Misseltoe, of the Oak of each a handful; Seeds of both the Wild Carrots of each three Drams, Raisins a handful; let them Boyl in four Pounds of Fountain Water till half be Consum'd; add of Whitewine two Pound and a half: Strain it, Let it be kept in Vessels close stopt. The Dose is three or four Ounces twice a day.

Take Seeds of Wild Carrots bruis'd two Ounces, Castoreum an Ounce, put them in a Glass with two Pounds of White-wine. The Dose is two Ounces twice a day.

3. As to the third intent, which putting a stop to the disorders of the Womb, advances the Cure of the Hysterick affect: I say in the first place that what was formerly believ'd concerning the Cause of the Disease, and the Scope of Curing it, *viz.* That the Womb did Ascend, and therefore that it ought to be restor'd to its due place, is altogether Fictitious, as we have shewn elsewhere: The descent, or falling forth of the Womb often happens, but this seldom or never produces Hysterical affects: Moreover a Dislocation of the Womb sometimes happens to Child-bearing Women presently after Child-birth, *viz.* When the body of the Womb being enlarged and newly emptied, does not settle in a right place within its Cavity, but leans high, sometimes to the right side of it, sometimes to the left, and there being Contring'd like a Purse is folded up in a great Lump, which Lump lying a long time in the side of the Inguen, is wont to Cause suspicion of another Fœtus, or of the after Birth being left behind, or also of a Scirrhous Tumour there Growing but afterward, when upon the Lochia's passing away freely, the Womb is reduc't to its due magnitude, that Tumour vanishes by degrees: And whilst it continues there, unless haply the Lochia are thereby stop't, it does not cause Hysterick Passions: For the quick reducing of this part to its due position, Fomentations, Liniments, and Plaisters contribute much: But very often that Symptom passes away of its own accord without any further offence: We have shewn elsewhere *ex professo* to what affects else the Womb is obnoxious after Child-birth, and with what methods of Physick we must obviate them: As to the other Distempers of this part, which happen to other Women, *viz.* to such as do not Bear Children; we observe those chiefly to be either a Disease of the Womb caus'd by a Solution of continuity, which is either a Tumour or an Ulcer; or to be a Stoppage of some usual Excretion, *viz.* either of the *Sanguis Menstruus*, or of the *Fluor albus*, or of the Seminal Humour; by reason of the *Menses* retain'd the Heterogeneous particles being often discharged on the Head

Cause

Cauſe Convulſive Paſſions: In like manner when the White Humour is ſtop't the Excrementitious Matter being drank in again by the Blood is delivered to the Brain and *Genus Nervoſum*. Moreover when a wonted evacuation of the Seed is ſtop't, the ſuperfluities of the Nervous Humour Regurgitate into the Brain, and infect the Spiuits in it with a Morbifick and Explosive Tincture. It will not be neceſſary for us to diſcourſe particularly and at large on theſe particular affects of the Womb, but to Complicate Medicines and Phyſical Adminiſtrations appropriated to Womens Diſeaſes, with Anticonvulſive Remedies.

CHAP. IX.

Of Affects vulgarly call'd Hypochondriacal, which are ſhewn to be for the greateſt part Convulſive, and by the by of Chalybeate Medicines.

AS we have ſhewn before that the Paſſions vulgarly call'd Hyſterical do not always proceed from the Womb, but oftner from the Head's being affected: So though it has been vulgarly held that the affects call'd Hypochondriacal are caus'd for the moſt part by Vapours ariſing from the Spleen, and running hither and thither; yet in truth thoſe diſtempers are for the greateſt part Convulſions and Contractions of the Nervous parts; which may better appear after we have conſidered the Symptoms.

As to the affects therefore which are vulgarly call'd Hypochondriacal it is to be obſerved that they chiefly happen to perſons of a Melancholick Conſtitution, with a wan aſpect and a thin habit of body: It is ſeldom that that Diſeaſe troubles perſons who are well in fleſh, and have a florid, or alſo an over Phlegmatick countenance: About the time that perſons come to a ſet age it diſcovers itſelf with manifeſt ſigns; Men are found to be more frequently obnoxious to this than Women, in both being become habitual it is cur'd with great difficulty, or ſcarce at all; in Women by reaſon of their weaker Conſtitution, it is attended with far more Convulſive affects: Wherefore it is commonly ſaid in this Sex, that the Hyſterick affect is joyn'd to the Hypochondriacal.

The Symptoms which are accounted as belonging to this Diſeaſe are commonly very many, and of a differing Nature, nor have they in all a like Origine, or the ſame mutual dependance on each other: For we ſee that in theſe the Viſcera of the Belly, in thoſe the Præcordia, in others the Confines of the Brain are moſt affected: In a great many, but not in all, the Stomach much Labours; as to appetite it has often too much of it, but is preſently oppreſt by what is taken into it; and when the food through ſlowneſs of Concoction tarries a long time in it, the Saline particles of it being rais'd to a ſtate of flowing, pervert the whole maſs of the Chyle into a Pap, ſometimes Acid or Auſtere, ſometimes Salt or Tart: Hence a Cardialgia, a mighty ſtore of Flatus's, a Rumbling, and a frequent Vomiting enſue; and becauſe through a defect of a *Pneumatoſis* the Chyme is not volatilis'd throughout, and carryed forth, but a Maſs of Viſcous Matter, ſticking to the Coats of the Stomach is left behind, an almoſt continual Spitting moleſts them, a diſtention in the left Hypochondre and often there and under the Ventricle a violent beating is felt, and there pains every where ariſe; which ſhoot here and there at random, and miſerably torture the perſon with a certain pungent Pain for many hours. Mean while, from the Contractions of the Membranes and the Fluctuation of the Flatus's thence rais'd, Croakings and Rumblings are produc't: So in the Thorax there is often a great Straitneſs and Conſtriction, ſo that the Breathing becomes difficult and painful upon any motion; nay farther, in ſome very terrible Aſtmatick Fits ſupervene: Moreover the diſeas'd are wont to complain of a Trembling and palpitation of the heart, with a mighty oppreſſion of the ſame, alſo frequent Failings of the Spirits, and danger of Swooning come upon them, that the diſeaſed always think Death at hand: In this Region about the Membranes, and eſpecially the Mediaſtinum, an acute Pain, which one while is determin'd in one part, another while is extended to the Shoulder, is a familiar Symptom of this Diſeaſe: But in the Head an Iliad of Evils for the moſt part troubles Hypochondriacal perſons, to wit, moſt violent Pains Periodically returning ariſe; alſo Scotomia's, frequent Giddineſs, Obſtinate Watchings, a Fervency and a moſt troubleſome Fluctuation of thoughts, inconſtancy of mind, a diſturb'd fancy, a dread and ſuſpicion of every thing, an Imaginary being Affected with Diſeaſes of which they are free, and many other diſtractions of the Spirits, nay ſometimes Melancholy, and a Mania accompany this Sickneſs: Beſides theſe interiour Regions of the Body being beſet with this Diſeaſe; wandring Pains, alſo Cramps and Numbneſſes with a ſenſe of Formication ſeiſe likewiſe almoſt all the outward parts: Night Sweats, Fluſhings of

Blood

Blood in the Face and Palms of the Hands, Fevers of uncertain returns, and many other Symptoms of an incertain Origine on all hands arise, of which in regard it has not been easy to assign the Genuine causes and ways of their coming to pass, Physicians have charg'd, (though unjustly) all the blame on the Spleen: In the mean while it is to be observ'd that the chief Symptoms of this distemper are convulsive and depend immediatly upon the Irregularities of the Animal Spirits, and Nervous Juice, rather than on the Dyscrasies of the Viscera that serve for Concoction.

As a great many have ascribed this valetudinary disposition to the only fault of the Spleen: So others making all the confines of this Entral a party in the fault, will have the Blood lying in any part soever of the Vessels of the Spleen and Epigastrick Region to give the Origine to this evil. But the renowned *Highmore* has charg'd the chief cause of this Disease wholly on the faulty Constitution of the Stomach.

Concerning this opinion, though I so far agree with this famous Author, that I may grant the Ventricle to be often greatly distemper'd in this affect: Yet I cannot be brought to think that all the Symptoms of the Hypochondriacal Disease depend only on the Ill constitution of the Ventricle, for I have known many sorely afflicted with that Distemper, whose Stomachs were well enough; and I have known others who through an ill dyet have brought their Stomachs to be greatly Distempered, yet, as to the Precordia and Animal Faculties being sound enough, they were not at all accounted Hypochondriacal.

As to what the Spleen contributes to this Disease, Dr. *Willis* first curiously observing the use of this part, to wit that from the Blood brought to it from the Arteries, a certain Dreggy Portion, *viz.* consisting of an Earthly matter and a Fixt Salt, is depos'd in this Entral, which being there exalted as it were by Digestion, and rais'd to the nature of a Ferment, is again committed to the Blood as it passes back by the Veins, which inspires it with a certain Fermentation, and performs the same thing as to its *Pneumatosis*, as our common Leaven does when mixt in a Mass of Meal, so that as the Leaven inables the sluggish parts in the Bread for Motion, so the Ferment of this Entral raises the sluggish Particles of the Blood to a state of activity. And secondly considering the intimate communication betwixt the Brain and the Spleen by the means of the Nerves, of which there are a world of Plexus's and Fibres arising from them in this part; he says that the ways of affecting with which the Spleen being evil dispos'd, produces, or at leastwise contributes to the rise of the Symptoms of the Hypochondriacal Distemper are chiefly these following. *Viz.*

Viz. First it sometimes happens that the spongy substance of the Spleen is very much stuff't and obstructed by the Fæces of the Blood sticking too much in its Pores and there Stagnating, so that afterward it does not admit into it the Dreggs of the Mass of Blood as much as it ought, but the same being brought thither, but not receiv'd, Regurgitate into the neighbouring Branches of the Cæliack Artery, whence presently they are convey'd into the Membranes of the Ventricle, the Caul and Mesentery, and other neighbouring parts, and are wont to stick in them, hence the Tone of those Viscera is so much perverted, that they cannot rightly execue their due Functions in order to the Concoction of the Chyle, and the Circumjacent Membranes, being very much fill'd with Heterogeneous and Irritative Particles, become mightily obnoxious to Convulsions arising here and there, to running Pains, Contractions, Distentions and a multitude of Flatus's.

2. Though the Spleen should receive freely enough the Melancholy Juice brought by it from the Blood to the Arteries, yet often it does not duly Concoct the same, but the salt being very much exalted, perverts it into a humour too Sharp, or Austere, or faulty some other way; wherewith when the whole Mass of Blood, and the stock of Nutritive Juice contained in it, are infected, the fruits of a Hypochondriacal seed display themselves throughout the whole body; the Blood boiling more then it ought, is driven violently into certain parts, and at the same time in others it is apt to stagnate: Hence some presently upon eating have Flushings in the Face, the palms of their hands burn, *&c.* In some again running pains with a Pricking happen in many parts of the Body.

3. From the Blood thus deprav'd through the fault of the Spleen, a prejudice also is often brought on the Animal function, the Heterogeneous and Convulsive particles being often discharged on the Brain and *Genus Nervosum*, hence persons are troubled with fancies and thoughts, with Giddiness, Scotomia's, Head-aches, and often Paralitick affects. Then as the Morbifick matter passes from the Brain into the *Genus Nervosum*, Convulsive affects are raised in many parts of the Body, but chiefly about the Precordia, and Viscera of the Belly, the Spirits that are in the Nerves which regard those parts being greatly troubled by the passions of the mind.

4. It is also very probable that the Nervous Fibres (whereof there are a world dispers't through the Spleen, sometimes receive into

into them its most Sharp Juice, which creeping up the Passages of the Nerves, often is the cause of Convulsive Motions: And there being an intimate commerce betwixt the Spleen and the Brain, we judge that besides the long way of the Blood, they have a nearer way of communication by the Nerves of the *Par Vagum* and *Intercostale* by which they mutually affect each other; so that sometimes the Melancholy being disturb'd in the Spleen, conveys thence the passion to the Brain, whence disorderly and Hypochondriacal fancies happen: And on the contrary, when a violent Passion of the mind, occasionally rais'd within the Brain, troubles the Spirits residing in it, the impression given the fancy, is convey'd to the spleen by the course and successive affect of the Spirits, lying within the Nerves of the *Par Vagum* and *Intercostale*; whence many disturbances are caused in that Entral and in the parts adjacent. I shall now give an instance of a person troubled with the Hypochondriacal affect.

An honourable person of a Melancholick temperament, and always accounted to be troubled with the Spleen, complained very much of a Pain and Inflation of the left Hypochondre, with a frequent Rumbling, and a Sour Belching, also a Trembling of the Heart, a continual Giddiness, a want of Sleep, and a Troubled Fancy; about the thirty fifth year of his Age, the Disease growing worse, he began to get Sleep with difficulty, or very seldom by night, and so in the day time to be troubled with a Fervency and Inconstancy of thoughts, to be suspicious of all things and persons, and to be Scar'd at every thing that came in his way; the Præcordia seem'd to be very much Constring'd and Straitn'd, and to fall in, as though the Heart it self were depress't into the Belly, which Symptom pressing him he became very sad, and dejected in mind: Yet afterward, those affects of the mind remitting, he plainly felt at once both the heart to be a little rais'd, and the Præcordia to be Relax't and Dilated: Moreover he had very frequently Pains and Contractions variously rais'd about the Muscles of the Viscera and Membranes, and passing from one place to another.

He us'd a great many Remedies and Physical Administrations a long time for the Cure of this Affect, but without any great good; at length, being somewhat relieved by the use of Mineral Waters, and afterwards growing better by degrees, he became free from those severe Symptoms, tho' he still continues obnoxious to the Hypochondriacal Affect.

The Therapeutick Method to be us'd against Hypochondriacal Affects, requires chiefly these four general Indications, viz. First, that the Impediments of the Cure be remov'd, which intention chiefly regards the cleansing and keeping of the first Passages. Secondly,

condly, We must endeavour to correct the Obstructions or other disorders of the Spleen. Thirdly, we must see that the excrementitious Dregs of the Mass of Blood be Purg'd forth, and that its due *Crasis* be restored. Fourthly, that the Irregularities of the Brain and *Genus Nervosum*, and also of the Humour and Spirits residing in them, contracted through the fault of the Blood and Spleen, be amended or abolish't. Since we must drive at many of these Intents together, or at all of them, let fit Seasons be chosen, in which we may satisfie each of these purposes without any prejudice to, or neglect of the Rest.

1. As to the first Indication, since a great Mass of crude or adust matter is wont to be heapt together in the first passages, and since the Tone of the Stomack uses to be weaken'd, and its Ferment to be variously perverted, let us seasonably obviate these Evils of each kind with fit Remedies; therefore mild and gentle Evacuations, both by Vomit, if it comes easily, and by Seige, ought to be given. I advise those whose Stomack easily discharges its Contents upwards, that once in a Month, by taking the Liquor of Squills, or Salt of Vitriol, and drinking good store of Posset-drink, or warm Water, they cause themselves to Vomit several times: In the interval of time, let a gentle Purge, and only lenitive, be often given. For this end the *Pilul. Tartareæ Bontii*, or *Stomac. cum Gummis*, or our Solutive Pills, may be used.

Take of the best Senna, an Ounce; Rhubarb, six Drams; Epithymum, three Drams; Yellow-Saunders, two Drams; Salt of Wormwood, two Drams; Celtick-Spike, a Dram: being sliced and bruised, let them digest in White-wine and Fumitory-water, of each ten Ounces, for twenty four hours, let the clear straining evaporate by a gentle Bath-heat to the consistency of an Extract, adding toward the end, Powder of Senna, Rhubarb, and Cream of Tartar, of each two Drams; let them be bruised together in a Glass Mortar, and reduced to a Consistency for Pills. The Dose is from half a Dram to two Scruples or a Dram.

The Remedies that regard the Tone and Ferment of the Stomach, since they are manifold, and of divers kinds, let such as are most proper for the Constitution of each Stomach be chosen; for with one Person bitter things, with another Salt, with others sharp, or haply smart things, best agree. Of the number of these Medicines (which are vulgarly called Digestives) are *Elixir Proprietatis*, *Tinctura Sacra*, the *Compound Powder of Aron Roots*, *Salt of Wormwood*, *Cream of Tartar*, *Tartar Vitriolate*, *Vitriol of Mars*, with many others. Besides these inward Remedies, outward applications also often give help: For to a Stomach ill dispos'd a fomentation of White Wine with Wormwood, Centory and other bitter

Plants

Plants boil'd in it; alſo Liniments or Plaiſters often give relief, of which it will not be needful to diſcourſe particularly, and to preſcribe forms of thoſe Medicines.

2. The Indication that undertakes to amend the Faults of the Spleen, (whether the ſame be an Obſtruction, or a Tumour or Pain, or a ſimple Dyſcraſy) is wont to be perform'd, or at leaſtwiſe attempted by Remedies both inward and outward; thoſe that are of the former kind are coincident with thoſe that are indicated in the third place, (to wit, with which the purifying of the Blood is intended) for ſince the chief, or in a manner all of that which is brought into or carried out of the Spleen, is by the conveyance of the Blood, the Irregularities, both of the blood's *Latex*, and of that Entral, ought to be cured by an aſſociated Operation, the vertues of the Medicines being joyn'd together; and we ſhall preſently ſhew after what manner: meanwhile ſome outward applications, in the form of a Plaiſter or Liniment, or Fomentation, have a more near and immediate regard to the body of the Spleen, and often give a mighty relief, *viz.* in as much as they diſcuſs the Tumours, reſtore to Circulation the melancholy Filth there ſtagnating, nay and appeaſe and reſtrain the Corrugations and Convulſive Affects of the Fibres. There is a mighty ſtore of theſe outward Medicaments to be found every where amongſt Authors, the choice of which, in regard it ought to be ordered according to the various paſſions of the Spleen, and the differing Conſtitutions of Patients, it will not be expedient in this place to deliver particular forms of them.

3. The Remedies indicated in the third place, *viz.* ſuch as take away the Dyſcraſies of the Blood, contracted by the Spleen, and withal cleanſe the primary taint of the Spleen, are manifold, and of a differing kind and condition; the choice of which ought to be made according to the various taint of this and of the other. Of theſe ſome are more compounded, to be prepared according to the preſcript of a Phyſician, as Electuaries, Powders, Apozems, Tinctures, Infuſions, and the like: others are more ſimple, as Whey, Aſſes Milk, Spaws, and hot Bath Waters.

There are two chief Caſes of ſick perſons, in which Magiſterial Remedies ought to be accommodated according to their ſtrength and qualities, *viz.* either the Blood is thick, coldiſh, and earthy, with an Obſtruction of the Spleen, which requires hot fermenting, and eſpecially chalybeat Medicines; or the Blood being manifeſtly aduſt, and intenſely hot, ferments above meaſure, and withal the Hypochondres are in a great trouble, and the Blood and Vapours boyl in them, in which ſtate only temperate Reme-

dies are indicated, for appeasing the fervency and immoderate Fermentation of the humours, where Chalybeats are altogether to be shun'd.

When therefore to a cold Stomach cold Dyscrasies also of the Blood and Spleen are joyn'd, I use to prescribe according to the following forms.

Take Troches of Rhubarb, Powder of Aron Roots, Winters bark, of each two Drams; Roots of Virginia *Serpentary, Contrayerva, Diatrion Santalon, Crabs-eyes, of each a Dram; Extract of Gentian and Centory, of each a Dram and a half; Ammoniacum dissolved in Water of Earth-worms, what suffices; make a Mass for Pills: let four Pills be taken in the Morning, and at four a Clock in the Afternoon, drinking after it a little Draught of Wormwood or Chalybeat Wine, with a moderate Exercise.*

Take Conserve of the Yellow Coats of Oranges and Lemons, of each three Ounces; Myrobalanes Condited, in number two; Species Aromatici Rosati, Winters bark, of each two Drams; Salt of Wormwood, two Drams; Vitriol of Mars, a Dram (or Steel prepar'd, three Drams) with a sufficient quantity of the Juice of Citron-Pills make an Electuary; let it be taken twice a day, drinking after it a Draught of Wormwood-wine, or of Wine in which the Bark or Flowers of Tamarisk are infus'd.

To those that like none but nice Medicines, and in a small quantity, you may properly give the *Tinctures of Antimony, of Coral, also of Steel prepar'd with Spirit of Wine, (the Body being first open'd by fit Menstruums, and brought to a* Calx*) nay, and I have known that Spirit of Soot, also of Blood or of Harts-horn, taken twice a day, to twelve drops, more or less, in an appropriated Liquor, have proved mighty beneficial, above any other Medicines.* Again, the assiduous drinking of *Coffee*, and of *Tea*, has done some very much good.

But if a Fervency and over-great Fermentation of the Blood be joyn'd to the Hypochondriacal Affect, with a fervent heat of the Spleen, and a restlesness of mind.

Take Conserve of Hips, six Ounces, (or of Flowers of Tamarisk, and Leaves of Wood-sorrel, of each three Ounces) Species Diarrhodon Abbatis, the Confection of Alkermes, of each a Dram; Ivory Powdered, a Dram and a half; Pearl, half a Dram; Salt of Tamarisk and of Wormwood, of each a Dram; with a sufficient quantity of Syrup of the Juice of Citrons, or of Clove Gillisflowers: Make an Opiate; let the quantity of a Nutmeg be taken twice a day.

Take Ivory Powdered, two Drams; Pearl powdered, a Dram, Species Diarrhodon Abbatis, and Diamargariti frigidi, of each a Dram and a half; make a subtle Powder; add of double refined Sugar dissolved in Balm Water and boiled to a Consistency for Tablets, six Ounces; Make Tablets according to Art: Take from a Dram and a half to two

Drams,

Drams twice a day. Or to other Medicines of the like kind let the use of *Spaw-waters* be joyn'd, which indeed in either, nay in any cases of Hypochondriack Melancholy, are in a manner always taken with good Success. For want of these Waters, let our *Artificial Spaw Waters* be taken in their stead: nay, and let *Whey*, and if there be a considerable Atrophia, let *Asses Milk* be daily taken.

Besides these inward Remedies, and the other outward Applications above mentioned, let Bleeding or Drawing of Blood from the Vessels of the Fundament by Leeches, be frequently used, nay, and it is proper sometimes, according to the Prescripts of the Antients, to open the *Salvatella Vein.* Moreover *Cauteries* and *Issues*, which continually derive forth the Recrements of the aduſt Blood, and discharge them by little and little, are wont to do good to all.

4. The Fourth Indication, having regard to the Affects, or Convulsive Symptoms of the Brain, and *Genus Nervosum*, which ensue upon the former, is seldom put in practice by it self, and apart from the others, but the Remedies appointed for this end are complicated with those above written. Liquors endowed with a volatile or Armoniack Salt, as Spirit of Harts-horn, of Soot, are very proper for this intent, and often likewise for the others, even now mentioned: Wherefore let such Remedies, unless somewhat indicates the contrary, be daily given at a seasonable hour: Moreover, when the *Spaw Waters* are Drunk, let Tablets or Pills, such as are above prescrib'd for Convulsive Affects, be taken at least twice a day. In a frequent giddiness, and *Scotomia*, also in Passions of the Heart, Faintings of the Spirits, with a fear, and a dread, as it were, of present Death, I have known a mighty Cure often performed by the use of *Chalybeat Medicines.*

Of Chalybeate Medicines.

SInce mention is here made of *Chalybeate Medicines*, it seems expedient to enquire into the various Preparations of them, and consequently into the divers sorts of Affects which they are wont to produce in the Body of Man, that hence it may appear by what means, and on what accounts, these or other Preparations of Iron mightily benefit some Hypochondriacal persons, and very much injure others.

Steel or Iron consists chiefly of Salt, Sulphur, and Earth; it has very little of Spirit and Water; and the Particles of the former Elements, especially the Sulphureous and Saline, in the mixt, combin'd together with the Earth, remain wholly fixt and without Action; but being loosed, and divided from each other, they have a very efficacious Energy.

The foresaid Particles are dissolv'd and set at Liberty for Action two ways, *viz.* either by Art, when Medicines are prepared, or by Nature, after they are inwardly taken. We shall consider both.

1. The Filing of Iron inwardly taken is dissolved by the Ferment of the Stomach, as by an acid Menstruum; and upon the Iron's being dissolved within the Viscera of Concoction, the active Particles, both Sulphureous and Saline, plentifully display themselves, and mixing with the nutritive Juice, are carried into the Blood, and as they are of a differing virtue, often both of them, as it were by joint Forces, conspire for the good of the Diseased. The Sulphureous Corpuscles, passing into the Blood, furnish it with a new and more plentiful stock of Sulphur, so that its Mass, if it were before depauperated and effæte, ferments more sprightly within its Vessels, and being more kindled in the Heart, acquires a Heat more intense, and a deeper colour. Thus many troubled with a Leucophlegmatia, and the longing Disease, whose Countenance is pale, and whose Blood is cold and watery, after the use of Steel soon become of a more florid Aspect, the Blood being given a more intense Tincture and Heat. Again, upon the Filing of Iron being dissolved in the Stomach, the Saline Particles also are displayed, and often produce good effects, both in the solid parts and the Humours; for being of a vitriolick and stiptick nature, they astringe and corroborate the over Lax and weaken'd Fibres of the Viscera, and so restore their broken Tone: Moreover they stop the Impetus of the Blood, repress its over boiling and

and rising to a Froth, and keep it in an even Circulation. And again, (which is their greatest Virtue) they straiten and close the over lax, open, and gaping Mouths of the Arteries so that neither the Serum nor bloody Latex may distil forth, or break off the thread of Circulation; Wherefore in Dropsies and Hæmorrhagies Remedies endued with the Saline Particles of Iron are of notable use and efficacy; for many Diseases proceed from this Cause, That the little Mouths of the Arteries being too open, and the Interstices of the Vessels being become too lax, the Serum or bloody Latex breaks forth; which kind of Affects are oftentimes cured by the Vitriolick Particles of Steel, they constringing and corroborating the Blood-Vessels and the Nervous Fibres.

After this manner the Filing of Steel inwardly taken seems at the same time to put Spurs to, and check the Blood; but in regard that this Medicine is much more powerful in instigating than restraining, therefore it ought to be given only to those whose Blood is very thick and cold, as to Rusticks and very Robust persons: It is not proper in a very hot and spirituous Blood, and in hot Bowels. Moreover in persons of a delicate and tender Constitution there is danger lest small Portions of Steel, when they are not able to be dissolved, are thrown on the Membranes of the Viscera, and sticking pertinaciously to them, cause Ulcers and mortal Gripes, which I have really known to have sometimes happen'd.

2. After the Filing of Iron, the next way of preparing it is by Calcining it with Sulphur, and reducing it to a Powder; in which Preparation of it, some of the Sulphureous Particles exhale: In the mean time the Saline Particles seem to be encreased, new ones accruing to them from the burning Sulphur, so that the active Particles of both kinds, *viz.* the Sulphureous and Saline, come near to an *Æquilibrium*; and since by this means this Medicine, the Texture of the Metal being loosened, may be brought to a very fine Powder, it becomes of a much more excellent use than the Filing of Iron. In many cases, where Steel ought not to be given in substance, as in a Cachexia, the longing Disease, and the like, it is proper to use this Medicine.

3. In the third place follows the Preparation of Steel with Vinegar, sprinkling the Filings of Steel with Vinegar, and drying it till it may be reduced into an impalpable Powder. In this Preparation the greatest part of the Sulphureous Particles evaporate, and the Saline are much encreased by reason of others accruing to them from the Vinegar. This Powder does little in opening the Obstructions of the Viscera, or in restoring the Ferment

ment of the Blood; nevertheleſs in a hot Conſtitution, in Hæmorrhagies, and in the Hypochondriacal affect it is wont to be given with greater ſucceſs, than the foregoing Preparations.

4. The ruſt of Iron follows, in which there being but few Sulphury Particles, it does not ſo powerfully Ferment the Blood, or open the obſtructions of the Viſcera, as Steel prepar'd with Sulphur, nevertheleſs in Hot dyſcraſies of the parts or humours, it Egregiouſly performs the Intents required from a Chalybeate Medicine.

In this Claſſis our preparation of Steel is juſtly plac't, in which all the Particles of the Metal being freed from the Bond of Mixture, are contained together: Which alſo (the Concrete being firſt reduc't to a Powder) are immediatly diſſolv'd in any Latex, or Menſtruum. This Powder inwardly taken excels in the ſame vertue, as Steel Calcin'd with Sulphur; But to the Menſtruum or Liquor in which it is diſſolv'd, it Communicates chiefly and in a manner only the Saline or Vitriolick Particles, the Sulphureous flying away, and the Earthly Particles ſubſiding in the bottom: I uſe to give common Water impregnated with this diſſolution inſtead of Natural Spaw Waters, in a great quantity; And often with excellent Succeſs: Moreover I make Medicinal Wine, Beer, Cider, Whey, and other Liquours by diſſolving this Powder in them, and order them to be taken for various Phyſical intents. So far of preparations of Iron in which the Elementary Particles of each kind, though in a various proportion are comprehended: There remain others in which the Particles in a manner only of one kind, *viz.* the Saline or Earthy are left, the reſt for the greateſt part being driven away, of which kind chiefly are Vitriol of Mars, Salt of Steel, and *Crocus Martis.*

5. *Salt of Steel* prepar'd as you may find here in Dr. *Willis*, has a Sweetiſh Taſt with ſomewhat of a Rough Stipticknes, and ſo much partakes of a Vitriolick nature, that it ſeems not much to differ from Green Copperas: Taken inwardly as a Medicine it ſomewhat ferments the Humours, and powerfully conſtringes the Nervous Fibres: In Cold and Phlegmatick Cachexia's, becauſe no Particles of Sulphur are exerted, this Medicine is not proper. It is often given with ſucceſs either by it ſelf, or mixt with other Medicines as a Spur, in Hot Dyſcraſies of the Viſcera, with a predominancy of aduſt Sulphur, alſo in Flitting, Scorbutical, and Irregular Boylings of the Blood, and Nervous Juice. Notwithſtanding in tender Conſtitutions there is danger leſt through its

its acrimony, and too great conſtriction, the Tone of the Stomach, and the Fibres be injur'd.

6. In the laſt place comes the aſtringent *Crocus Martis*, prepar'd by long Calcination in the Fire: This Medicine is of egregious uſe in ſome caſes, and yields to none of the Chalybeats. *viz.* in every Extravaſating, and too great Eruption of the Blood and Serum, as in inward, and outward Hæmorrhagies, in a Diarrhæa, a Diabetes, in a Vehement Catarrh, alſo in an Aſcites or a beginning Dropſie I have known nothing more excellent than this Medicine, & I have heard it lately mightily commended by a Famous and Expert Phyſician of our Country, of which Medicine nevertheleſs in regard it is wholly deſtitute both of Saline and Sulphureous Particles, and in a manner only conſiſts of ſuch as are Earthy and Fiery, it is much in diſpute with what Faculty it operates and produces ſo laudable an effect in humane body. For it might ſeem that nothing ſhould remain in this more than the *Caput Mortuum*, or *Terra Damnata* of Vitriol, and of other Minerals diſtill'd by a moſt intenſe Fire. To give my opinion concerning theſe things, it ſeems in the firſt place, that a certain activity whereby it exerts it ſelf and diſplays its virtues, either by opening obſtructions, or by Aſtringing the Veſſels and Nervous Fibres of the Viſcera, accrues to this preparation from the Fiery Particles being included in the moſt fixt Earth, and from their breaking forth within the Body. But the chief way of giving help conſiſts in this, that the Earthy Particles being wholly depriv'd of the Saline, (to which they were moſt cloſely bound) moſt earneſtly ſeek to be reunited to the ſame, or the like: Wherefore that *Crocus Martis* being Immerg'd in our Bodies, ſuddenly catches to it ſelf any ſorts of Salts that come in its way, and cloſely binds them to it, and ſo whilſt it drinks up like a Sponge a great many Saline Particles, it takes away many Enormities chiefly ariſing from the Flowings of the Salts. This way it is that Hartshorn burnt, Spodium, and Diaphoretick Antimony exert their vertues, if at any time they give help.

CHAP.

CHAP. X.

Of the Convulsive Cough and Asthma.

IT is Usual in Children (and I have known it also sometimes in Men) for a Cough to arise from a Mass of Serous Filth flowing in the Lungs: Which being at first Simple and Moderate afterward becomes vehement, and Convulsive, so that in Coughing the Diaphragm being contracted upward, and so held by a long, or very often repeated Systole; the Lungs are greatly straitned and very much hindred, in their motion: Mean while by reason of the respiration being hindred, and the Blood being restrain'd within the Præcordia, and consequently its Stagnating in other places, the Diseas'd are in danger of being Suffocated and often turn of a Livid or Cadaverous aspect: Moreover in this case, besides Convulsions with a violent Coughing, rais'd about the Præcordia, the Stomach also being often drawn in as a party concern'd, throws up all by Vomiting that is contain'd within it; nay and I have known, in some Tenderlings affected after this manner, that the Disease now and then passing into other parts, has rais'd Convulsive Motions in the Face, Eyes and Limbs, and at length has become Mortal. This Convulsive Cough happens very often amongst Children, and in certain years it seizes so many, that it seems plainly Epidemical, when it has got a Root, it is very difficultly conquered with remedies, but commonly drawing out in length, is scarce ever Cured but upon the change of the season of the year.

The cause of this Distemper seems to be from the Redundancy of the Serous Humour in the Mass of Blood, and in some measure in the whole Body: A portion of which matter Distilling from the Mouths of the Arteries on the Lungs, creates an ordinary Cough; afterward when the Serous Filth, still abounding in the Blood, and being fill'd with Convulsive Particles, is conveyed also into the Head, the same entring the Nerves of the Lungs, raises the Simple Cough to a Convulsive one: Moreover, when it sometimes happens, that the same Matter gathered together in the Head, enters some other Nerves; then other sorts of Convulsive affects often ensue upon the Convulsive Cough.

As

As a Cough arises, neither only, nor always through a fault in the Lungs, but sometimes from a Convulsive cause alone, though oftner fromthis coming upon an affect of the Lungs: So we may say the same of the Asthma; for whether this Disease be continual or periodical,in both cases the Symptom which chiefly presses, is a difficulty of Breathing; which indeed seems therefore to be rais'd,because the Lungs being too much puft up and Distended greatly, Fill the Cavity of the Thorax, and do not subside by turns as they ought: Hence neither can the Breath which lies within be freely sent forth, nor indeed the fresh Air be easily introduc't, by reason of the space being fill'd before. Whilst the Lungs are thus detain'd, for a long time in a continued, or little remitted dilatation, oftentimes the Diaphragm, against its Custom, is forc't to a violent Systole, and being contracted upward, is wont to raise the Lungs more and more, and to withstand their Subsiding: Whence it happens that the Breathing becomes yet more difficult and laborious.

That this affect of difficult Breathing sometimes happens through the fault of the Lungs, it has plainly appear'd to us by an Anatomical Inspection; for if a mighty Mass of Serous Filth depos'd in the Thorax, very much stuffs the Lungs, that the Blood being letted in its Circulation, does not pass freely the Pneumonick Vessels, then persons so affected are always short and thick Breath'd. Again, as often as the Blood becoming too Hot, or being rarified by exercise, or the heat of a Bed requires a larger space for its Circulation, Then presently on such an occasion every thick Breathing, or an Asthmatick Fit is rais'd, which often becomes Terrible and almost Suffocative when the Serum Boyls very much within the Lungs. Moreover sometimes besides the Roots of an Asthma fixt about the Præcordia, some Branches of the same disease springing from the Brain meet with the former, and being Complicated with them, produce more Terrible fruits of a difficult breathing.

There are Instances enough of these affects, *viz.* of a difficulty of Breathing, rais'd through the Single and Partial fault of the Lungs: For nothing is more usual than that persons troubled with an inveterate Cough, or with some other evil disposition of the Lungs, at length upon the access of a Dropsie or Scurvy, become Asthmatical, to wit, when the Blood being rendred very impure depose also its Serous Filth in the Head, this enters more readily and easily the Nerves of the Lungs than others, as being become Weak, and frequently Irritated in their extremities, and heaps together in them a matter for a Convulsive straitness of Breath.

Moreover I have sometimes observed that great Fits of the Asthma have happen'd without any considerable fault in the Lungs, so that I have really judg'd this Disease sometimes to be meerly Convulsive, and that its Fits are only rais'd because a Serous Filth, fill'd with explosive Particles, entring the Nerves that serve for the Dilatation of the Lungs, joyn'd with the Spirits there abounding, which afterward through a fulness, or Irritation being exploded together, and for some time, the Lungs are held as it were stiff, and blown up, that they can neither perform the functions of Expiration nor Inspiration: But the Fit being ended, and also before it is begun, the Breath is drawn free and evenly enough, there appearing no signs of a Cough, or of a Valetudinary disposition of the Lungs: I shall give an Instance of a person troubled with this Shortness of Breath.

A Gentleman of a Robust and Gross Habit of Body having us'd for some time a full and disorderly dyet, without any exercise, about the beginning of Winter began to find himself ill: First he was affected with a Heaviness and Pain of his Head, with a mighty Giddiness, and danger of Swooning, believing himself now and then, even a Dying, being otherwise sound enough; within a few days these Symptoms past into a manifest Stupor or rather Lethargy; Being let Blood in the Arm, I ordered that Cupping Glasses, Vesicatories, smart Glysters, with many other remedies shoul'd be carefully administred to him: Within the space of twenty four hours, coming to himself, he was found in his mind and shook off all Stupidness: But though his Brain came to be clear, he was seiz'd with a great Weakness and Deadness in his Members: which affects nevertheless were Cur'd in a short time with Antiparalytick, and Antiscorbutick remedies: But after a fortnight he complain'd again of the heaviness of his Head, and the Giddiness, and the next day after he fell into a horrible Asthma, so that the Lungs were blown up on a sudden, and rise upward; and being scarce at all able to draw his Breath, which was very short, painful, and greatly letted, he was in danger of being Suffocated every minute of an hour. This fit, as Violent as it was, past off within twelve hours without a Cough, Spitting, or Vomit, and for above a week afterward he was without any impediment in his Thorax: But then a like fit of the Asthma returning, treated him a little more mildly, and afterward he was wont to be troubled with a like assault of the Asthma upon great changes of the Air, especially when an intense Cold and Snow were at hand.

Moreover we judge that sometimes this Convulsive straitness of Breath is rais'd by reason of the Bronchia of the Trachea being too much straitn'd, and often wholly clos'd by the Constriction of

of the Nerves and stocks of Nervous Fibres, which every where compass about the Ramifications of the Aspera Arteria, that Constriction happening when those Nerves are forced to frequent Convulsions from a Morbifick matter besetting them.

A fine young Virgin, of a soft and tender Constitution, and of a florid Countenance, was scarce turn'd of eight years of age but began to be sorely troubled with Asthmatick Fits; and she lived at least four years obnoxious to them before she was committed to my care; sometimes she continues two or three Months free from any Invasion of this Disease, yet oftentimes, by reason of errors committed in Dyet, or upon great changes of the Year, or of the Air, she falls into cruel Fits of straitness of Breath, so that the Lungs being blown up and raised towards the Throat, and there held by an almost continual dilatation, the Diseased can scarce breath at all: mean while the Diaphragm and Muscles of the Breast are laboriously occupied in thick repeated efforts of motion, in order to draw the Breath by one means or other; this access, within seven or eight hours, remitting by degrees, ceases a while; but now and then within a Week or two it is wont to return either of its own accord, or on any light occasion being offer'd: after the violence of the Disease is past, its matter being spent in many such Fits, the young Lady continues well enough for many Weeks, nay sometimes Months, and being free from any Distemper of the Thorax, she Breaths freely. I order'd her Spring and Fall the following Method of Cure; and now she has been without any Fit of the foresaid Affect above two Years.

Take our Sulphur of Antimony six Grains; Cream of Tartar, six Grains; mix them: Let it be given in the Pap of a boiled Apple. After taking this Medicine, she is wont to Vomit four or five times: After four days, she takes this Purge, which also she is wont to repeat twice, allowing six or seven days betwixt whiles.

Take Calomelanos twelve Grains; Rosin of Jalap five Grains; Castoreum four Grains; with a sufficient quantity of Ammoniacum dissolved: make three Pills. She takes besides every day, Morning and Evening, *twelve Grains of Tincture of Antimony in a Spoonful of the following Julape, drinking after it six or seven Spoonfuls of the same.*

Take Water of Snails, six Ounces; of Earth-worms, four Ounces; Water of Pennyroyal and Rue, of each four Ounces; Hysterick Water, three Ounces.; Castoreum tyed in a Nodulus, and hung in a Glass, half a Dram, double refined Sugar, an Ounce: Mix them in a Glass; make a Julape.

About *Autumn* the last Year, another young Girl of Quality, being ill after the like manner, *viz.* with a Periodical Asthma,

was brought to me to be cured, who using the foresaid Remedies in a little less Dose, and repeating the same the last Spring found a mighty Relief.

As to the Remedies and Method of Cure that ought to be us'd, if at any time to a Cough, or straitness of Breath, first raised through a fault in the Lungs, Convulsive Symptoms also supervene, by reason of an injury communicated to the Brain; let care be taken that Anticonvulsive Medicines be aptly complicated with such as have regard to any intents whatsoever of the Thorax; and also sometimes, That one while, these, another while the others being given apart, the times of Curing be interchangeably observed. It will be needless to give here Bechick or Pneumonick Medicines and their forms, whereof there is a vast store every where to be found amongst Physical Authors; it will be more to our purpose to set down a method of Physick, and some select Remedies that are proper in a Cough and Asthma, which are meerly Convulsive.

As to the former Affect, which is chiefly familiar to Children, and for the most part is not Cured but with difficulty, and after a long time; the chief Indications will be, both to purge the serous and sharp Humours from the Blood and Viscera, for preventing their Incursion and discharge on the Brain, and sometimes haply on the Breast, and to strengthen these parts that they do not easily admit into them the Superfluities of the boiling Serum: for these ends Vomits and gentle Purges in a manner always are conducing, and ought by some means to be repeated. Vesicatories are often beneficial; and if the Disease be obstinate, let Issues be made in the Nape of the Neck, or in the Arm, or about the Arm-pits: Let Drink and Liquid Food be taken in a less quantity than usual; instead of Drink, let a *Bochet of Sarsa, China, the Saunders, Shavings of Ivory and Harts-horn, with Diuretick and Anticonvulsive Ingredients, be used.* In this case certain specifick Remedies as it were are greatly commended, of which kind are *Cup Moss*, given in Powder, or boil'd in Milk, and so given frequently every day; the *Decoction, or Syrup, of Castoreum and Saffron*, the *Decoctions of Peony-Root, Misseltow of the Oak*, also of *Hyssop*, have helpt many; *Water of Black-Cherries*, of *Saxifrage*, *Water of Snails distilled with Whey*, and appropriated Ingredients, are often given with success.

2. I have shewn you before by what method, and with what Remedies I have Cured a Periodical Asthma in some; but besides, the famous *Riverius* has observ'd that Vomits do most good to many affected with this Disease; for that Medicine, greatly shaking and irritating the Emunctories that are seated about the first

first Passages, strongly expresses and draws away from the same the filthy Dregs of the Blood and Nervous Juice, which were apt to be forc'd into, or to stagnate in the Brain and *Genius Nervosum*. *Zacutus Lusitanus* greatly extols, and not without reason, Cauteries burnt, sometimes in the Bregma, sometimes in the Nape of the Neck, or about the Arm-pits: Preparations of Millepedes, *viz.* in the form of a dry Powder, or of a Distill'd Liquor, seldom want success; for such withdraw the superfluities of the Serum or *Genus Nervosum* from the Head, and convey them to the Urinary Passages: For the same reason gentle Purges, and such as evacuate *per Epicrasin*, are frequently used: for this purpose the Decoction of an old Cock, with altering and gently Purging Medicines, sown up in the Belly of it, is commended by many. Besides the Remedies hitherto mentioned, some are said to be appropriated to, and as it were Specificks for the Asthma, such as are *Balsam of Sulphur Teribinthinated*; also *Spirit of Harts-horn*, or of *Soot*, impregnated with the same; *Syrup of Tobacco, of Ammoniacum, our Syrup of Diasulphur, Lohoch de allio, Pills of Elecampane Roots, Milk of Sulphur, Flowers of Benzoin*, made up with Tar or liquid Amber; with many other things, which it would be tedious here particularly to enumerate.

And now having given you the ways of curing the chief kinds of Convulsions, it seems time to put an end to this Tract; but since there remains another kind of Disease, *viz.* the Scurvy, which contains Passions of a mixt nature, *viz.* partly Convulsive, and partly arising immediately from the Dyscrasies of the Blood and Viscera, I think it expedient to give you briefly the way of Curing that; for both these Affects, *viz.* the Scorbutick, and Convulsive, being placed together, will mutually illustrate each other.

THE

The Practice of PHYSICK, Contained in Dr. *WILLIS*'s TRACT OF THE SCURVY.

CHAP. I.

THE Nature of the Scurvy being ſo diffuſed, and extended to ſo various and ſuch a multiplicity of Symptoms, that it cannot be comprehended in one only Definition, or ſcarce in one particular Deſcription, I think it fit in the firſt place to heap together all the Phænomena of this Diſeaſe, or to ſet forth in full all the chief accidents of it, and then to accommodate ſome Hypotheſis for duely Solving thoſe appearances.

As to the former, to conſider the ſigns of the Scurvy from Head to Foot, we ſhall begin with thoſe in the higheſt part: To this place belong violent and habitual Head-aches, and thoſe either happening at random, or periodical; ſometimes a deadneſs and drowſineſs of the Spirits; ſometimes obſtinate Watchings, frequent

frequent Giddineſſes's and Scotomia's, Convulſions, a Palſey, much Spitting, ſoreneſs of the Gums, a looſeneſs of the Teeth, a ſtinking Breath. 2. Meanwhile about the Region of the Breaſt, Pains in various parts of the Membranes, and eſpecially in the Sternum, which often being acute and pricking, miſerably torture the Diſeaſed for many Days and Nights, a frequent Aſthma, a difficult and uneven Breathing, a Conſtriction and ſtraitneſs of the Breaſt, a husky Cough, a diſorderly Pulſe, a trembling of the Heart, frequent Faintings of the Spirits, a frequent Swooning, and a continual being in danger of it. 3. In the Region of the Belly this Diſeaſe eſtabliſhing, as it were, its principal Seat, produces Iliads of Evils. For there are often a nauſeouſneſs, a Vomiting, a Rumbling, a Cardialgia, Inflations and Murmurings of the Hypochondres, a frequent Colick, and moſt troubleſome Pains ſhooting every way, an almoſt continual Diarrhæa, ſometimes a Dyſentery or Teneſmus, an Atrophia, and ſometimes an Aſcites.

The Urine is commonly very ruddy and lixivial, with a Scum ſwimming on it, or ſticking to the ſides of the Glaſs; tho' now and then, at certain times, the ſame being pale and Watry, is voided in a great plenty. 4. Beſides theſe inward Affects, in the outward Members, nay in the whole Habit of the Body, wandering Pains, and often very violent, and chiefly infeſting by night, are felt; a ſpontaneous Laſſitude, a Conſumption of the Fleſh, an Ach in the Loins, and a weakneſs and enervation of the other Limbs, Spots of various colours in the Skin, Tumours, Tubercles, and often malignant Ulcers break forth; about the Muſcles a Stupor, Formication, and aſcent as it were of a cold Wind, alſo Contractions and Twitchings of the Tendons: Moreover to Scorbutical Perſons, diſorders of the Blood, unconſtant Boilings of it, reſtleſs diſtemperatures Feavers, without any conſtant Courſe, and great Hæmorrhagies, generally happen. Beſides theſe common and very uſual Symptoms of the Scurvy, whereof ſometimes more, ſometimes fewer, and thoſe one while of this kind and faſhion, another while of that, infeſt the Diſeaſed, ſometimes alſo unuſual and prodigious Accidents enſue upon this Diſeaſe.

As to the evident Cauſes of the Scurvy, though an ill Dyet, a ſedentary Life, a diſorder of the Spleen, and Crudities heap't together in the firſt Paſſages, are very much accus'd, yet the unwholſomneſs of the Air, and the Craſis of the Blood vitiated by former Diſtempers are wont to be much rather in the fault; wherefore the Scurvy, in Maritime and Marſhy places, is often endemious: It frequently ſeizes ſuh as are long at Sea, and uſe in the mean while Salt Meats, and ſuch as are dryed in the Smoak,

and

and also corrupted Water: It every where succeeds long continued Feavers, and other Chronical Diseases ill Cured, also over great Hæmorrhagies and other immoderate Excretions, nay and the suppression of usual Evacuations, as of the Menses and Hæmorrhoids. Moreover this Disease, without any great procatarxis is often wont to be raised by Contagion, and sometimes is hereditary.

The material cause of this Disease, or the Scorbutick taint diffused through the whole Body, is founded either in the Blood, or in the nervous Juice, or in both of them together. That the Scorbutick Taint is fix't in the Blood, its disorderly Boilings, the Eruptions of Spots and Pushes, the ruddy and as it were lixiviated Urine plainly testifie; which is also shewn by the diversified production of this Disease, which for the most part succeeds the depravation of the mass of Blood: That the Taint sticks also in the Nervous Liquor, is shewn by the most troublesome Pains raised both inwardly in the Membranes, and outwardly in the *Genus Nervosum*, by the weaknesses or resolutions of the Members, the Giddiness, the Convulsions and frequent Failings of the Animal Spirits. Since therefore both general Humors are in fault, let us see which is first or chief in fault, whence it drew its Taint, and after what manner it is communicated to the other Humour, and likewise to any other Parts that are wont to be affected.

As to the Blood, (in whose Mass the Scurvy seems chiefly to spread its Roots) we have shewn elsewhere, that in its Crasis it consists of the like kind of Particles, and is temper'd almost after the like manner as Wines. Moreover we have intimated that as Wine, even so the Blood, for two causes chiefly, is ill disposed, *viz.* either because some extraneous thing, that will not duely mix with them, is got into this or the other, or because the Crasis or temper of the Liquor is perverted, in as much as one Element, or haply two, to which the Dominion is due, being suppress, others which ought to be kept under, are exalted.

Concerning the former, we observe in Wine, that when the Fœces, first sever'd and thrown to the bottom, being stirr'd again are rais'd; or if any Heterogeneous thing, as Sewet or an exotick Sulphur be cast into the Vessel, a mighty working is thence caus'd, which unless it be appeas'd in a short time, the Crasis of the Wine is in danger of being subverted: In like manner there are many immiscible things, which coming into the Blood disturk its Motion and Circulation, and hinder the course of its Oeconomy from being duely performed: The Nutritive Liquor being filled with filthy Dreggs, Ferments the Blood in a disor-

diſorderly manner: Nay and its Liquor being become degenerate, cauſes Fits of intermittent Fevers: The Vapoury, Serous, Bilous and Melancholy Recrements of the Blood retain'd within it, beget Catarrhs, the Dropſie, the Jaundiſe, Melancholy, and many other Affects: Now if that extraneous thing be ſeaſonably removed, the Blood even as the Wine being free from that Extraneous Mixture, ſoon recovers its former Conſtitution: But each of thoſe Liquors being for ſome time infected with Heterogeneous Contents, at length degenerates from its due Craſis, and conſequently is not eaſily reſtor'd.

Again, both Wine and the Blood fall from their due Temper for many other cauſes: 1. Concerning Wines we may obſerve, that ſometimes the ſame do not come to a ripeneſs, but for want of a Pneumatoſis, becauſe the Spirits, and other active principles of Salt and Sulphur, being involv'd in ſuch as are more Groſs, cannnot clear themſelves, remain wholly Crude: Wherefore they do not become Spirituous; but being of a Groſs conſiſtency, and of an ingrateful ſavour, degenerate into a Flat Wine without ſtrength: Even ſo the Blood, ſometimes the Spirit and Sulphur being depreſt, remains Crude and Watry, alſo without vigour, and unapt for a ſprightly accenſion in the Heart; ſuch a diſpoſition cauſes the longing Diſeaſe, and an Hydropical Diatheſis. 2. The Sulphureous part of the Wine being exalted above the reſt, cauſes an Immoderate Effervescency, or an ebullition in the Liquor; we call it *a Fretting of Wines*: In like manner the Sulphureous part of the Blood being too much exalted, and conſequently apt to Boyl, and be kindled in the Heart too much, brings a Feveriſh diſtemper, and is really the cauſe of many continual Fevers. 3. Often in Wine the Spirit becoming faint, and the Sulphur being bound, the Saline part is rais'd to a State of flowing, and prædominates over the reſt, wherefore the Liquor, paſſes into Vinegar; from ſuch an Acetous diſpoſition of the Blood, Melancholy is caus'd. 4 It's a vulgar obſervation in Wines, that beſides that they degenerate into a Flat Wine, or into Vinegar, the ſame ſometimes upon the Spirits being depreſt, and the Salt and Sulphur's being together exalted, become either Rank, or Pendulous, or Mucilaginous, we call it, *Wines become over Fretted or become Ropy*: In both changes, the Spirit being brought under, the Sulphureous and Saline Particles are joyn'd together and are above the other Elements, and bring the Craſis of the Liquor to their nature: But the thing is not done in both wholly after the ſame manner; for in the former dyſcraſie of the Wine the Sulphur is a little above the Salt, and in the latter, the Salt is above the Sulphur: Nay and either of them being in power, and having thrown off the Dominion

of the Spirit, takes the other to it, and raiſes it above its due ſtate.

Now it's probable that the Blood is altered after the like manner in the Scorbutick affect, as Wines when upon being overheated, become over Fretted, or become Ropy, and we may conclude the Dyſcraſy of the Blood, which is the Parent of the Scurvy, to be two fold as that of Wine, *viz.* Sulphureo-Saline, and Salino-Sulphureous. For there being a very great variety of affects, which are accounted of, as belonging to the Scurvy, all of them may be aptly enough reduc't to theſe two, as it were, chief heads, or as the two fountains of the evil: *viz.* Firſt that the Blood being touch't with a Scorbutick taint, either is very hot, as in which the Sulphur having gotten the Dominion takes the Salt to it: wherefore being become rank it Boyls diſorderly in the Veſſels, and diſcharges continually from it ſelf aduſt Recrements, *viz.* the concretions of the Salt and Sulphur, and diſperſes them every way, which being outwardly ſpread, produce Spots, Wheals, Puſhes, or Ulcers: But being inwardly depos'd cauſe Vomitings, Cardialgias, Diarrhæas or Dyſenteries, and alſo violent pains. In this kind of Scorbutick rankneſs of the Blood only temperate remedies and frequent Bleedings agree; and not Scurvygraſs, horſe Raddiſh, and other things of a ſmart and inſtigating Nature: After the ſame manner as overfretted Wines areCur'd byRacking them from theLees, and likewiſe by pouring Milk, Amylum, Ichthiocolla, and other Lenifying things to them. Or, Secondly in the Blood which Foments the Scurvy, the Salt having got the Dominion takes to it ſelf the Sulphur, wherefore it is not ſo hot, but like Ropy Wine becomes thick and Mucilaginous, as it were, is Circulated ſlowly in the Veſſels, and is apt to ſtuff the Veſſels as it paſſes through them, Furring them with a Muddy Filth. Such as are ſo affected for the moſt part being without Puſhes or Cutaneous Eruptions, become Dull, Purſy, and enervated, are troubled with a Spontaneous Laſſitude, a Straitneſs of the Breaſt; nay and are found obnoxious to Paſſions of the heart, Faintings of the Spirits, to a Giddineſs and Convulſions: And in this kind of Scorbutick diſpoſition, Hot remedies, and ſuch as are endued with a Volatile Salt, nay and Calybeates, which Fuſe and exagitate the Blood are wont to be moſt of uſe; after the like manner as Ropy Wines are dealt with, to wit they ought to be very much ſtirr'd, and agitated and alſo quicklime, burnt Allom, Lime Plaiſter, Sea Salt Calcin'd, and other things of a very ſmart nature are put into them I ſhall now ſhew after what manner the ſeeds of that Diſeaſe are laid in the other general humour, *viz.* the Nervous Juice.

About

About the beginnings of a Scurvy, till the Crasis of the Blood, and the Tone of the Brain are wholly vitiated, that Subtle Liquor which passes in the Brain and Nerves, and is distill'd from the Blood coming to the Brain, both as the Matter and Vehicle of the Animal Spirits, is yet Spirituous and Sweet, and not very unapt for any offices it ought to perform, but afterwards from the Mass of Blood become depauperated, and very much Effæte, a much thinner Latex, and inclining to a Sourness is distill'd: Moreover from the Dreggy, and as it were Rank, or Muddy Blood, Heterogeneous Particles, and such as are very injurious to the Animal Oeconomy, are sent, and are admitted without difficulty into the Brain, which is become weak, and thence are diffus'd into its appendix both Medullary and Nervous with the Juice which passes in them: Hence follow the Failings and Eclipses, sometimes Distractions, and Painful and Convulsive Explosions of the Animal Spirits, that happen in each of the Regions. Wherefore the Palsey, Convulsions, a Giddiness, Pains, Tremblings, and other Præternatural affects of the Brain and *Genus Nervosum* are wont to ensue upon a Scurvy when deeply rooted. Mean while, we may observe in general that the Scorbutick Taint, fixt in the Nervous Juice, Consists in these three things, *viz.* In some one of them or in all of them together, *viz.* that the Liquor lying in the Brain and Nerves becomes much more thin or poorer; that it degenerates from its Spirituo-Saline Crasis towards a Sourness; that it is stuff't with Heterogeneous and Morbifick Particles.

As to the Prognostick of the Scurvy, let your judgment in this case be wary, long suspended, and not rash, for many (as it has occurr'd to our observation) accounted for desperate, have recovered: I have seen some even ready to be Choak't with a horrible Asthma; others just a dying with frequent Swoonings, nay and others seiz'd with a Palsey or Convulsive Fits, or a terrible Colick, who were wholly freed in a short time by the help of Medicines: I have known some Scorbutical persons Swoll'n all over their body by the Dropsy, others brought to an extream Leanness by an Atrophia, who were restor'd again to their perfect health. Therefore though persons troubled with this Disease are sometimes press't upon with very dangerous affects, if nevertheless the Viscera are still indifferently sound, or at least not very much vitiated, you must not despair of those evils, caus'd meerly by the Scorbutick taint: But on the contrary, when the Symptoms appear less terrible, if the contents of the Hypochondres and Abdomen are become hardned, and as it were Scirrhous, or if the Lungs begin to be corrupted, promise nothing great or favourable concerning the Cure of the Disease.

Since as this affect grows to a high pitch, a manifold and diverſifyed Morbifick Matter, cauſing Symptoms of a various kind, and nature, is engendred, therefore let remedies not only of one kind be adminiſtred: But when any Method of Phyſick, though preſcrib'd with great judgment, does little or nothing towards a Cure, the Diſeas'd are not preſently to be left, but let other Medicines, and now and then others be try'd; for the ſame do not agree with all perſons, nor always with the ſame perſon. In the affected Body the Powers and Combinations of the Salts and Sulphurs every where vary, even ſo let the Medicines that do no good be ſometimes chang'd, till you light upon ſome one that agrees very well, and gives help.

But if notwithſtanding the uſe of Remedies, or upon their not being well applyed, the Scurvy getting ground by degrees is daily rais'd to a worſe State; it brings at length the Dropſy or Ptiſick: From this or that Diſeaſe there is a ready paſſage to Death; for after that the Blood is very much depraved it diſcharges its dreggy Excrements, when at long run they are much heap't together, either on the Lungs, or on the Viſcera of the Belly, and conſequently, it brings one of thoſe two affects which are alike Mortal.

CHAP. II.

Of the Cure of the Scurvy.

AS to the Cure of the Scurvy, ſince it is no one ſingle preternatural affect, but a Legion that is to be conquered, therefore the Method of curing ought to comprehend manifold indications, and thoſe variouſly complicated and ſubordinate; which nevertheleſs according to our wont we ſhall reduce to three heads, *viz.* that they be Preſervatory, which have regard to, and take away the cauſe of the Diſeaſe; and Curatory, which have reſpect to, and remove the Diſeaſe it ſelf and its Symptoms; and laſtly Vital, which uphold or reſtore the ſtrength and vigour of the Patient.

From the very beginning of the Cure we ought to level againſt the Cauſe of the Diſeaſe, for this being cut off, or torn up as the root, preſently the Trunk, Branches, and Fruits wither away: Since therefore we have ſhewn that the cauſe of the Scurvy is founded in the Dyſcraſie of the Blood, *viz.* Sulphureo-ſaline,

ſaline, or Salino-ſulphureous: In the firſt place we muſt endeavour the beſt we may, the amendment of that Dyſcraſie, as well of the one kind, as of the other: For this purpoſe, firſt let the impediments be remov'd, then let the primary intention it ſelf be effected: For both intents, remedies are taken from Dyet, Chirurgery and Pharmacy. As to the Dyet, we ſhall ſet down a particular form of it hereafter: Mean while to proceed with the reſt.

The reducement of the Blood to its due Craſis by appropriated remedies is chiefly hindred by reaſon of theſe two things; *viz.* firſt becauſe none but a vitious ſtock of nutritive juice is continually carryed into it; and ſecondly, becauſe the Recrements produc't within it are not ſufficiently diſcharg'd by fit Common-ſhores; therefore we muſt provide both that the work of Chylification be rightly perform'd in the firſt paſſages, and that the Vapoury Recrements be ſufficiently diſcharg'd by Perſpiration, the Serous by the Reins and Lymphæducts, the Bilious by the Gall Bladder, the Melancoly by the Spleen, and others of any other kind elſe by proper Emunctories: Afterward, theſe offices being rightly Inſtituted, let us endeavour to reduce the Dyſcraſie of the Blood by ſpecifick Medicines, and eſpecially by ſuch as are endow'd with a Volatile Salt. The remedies regarding every of theſe intents, ought to be Complicated together, and to be applied joyntly to uſe, but after what manner, and by what ways of adminiſtration, I muſt yet more particularly ſet forth.

1. That Chylification may be rightly perform'd in the firſt Paſſages, we muſt take care that the load of Excrementitious Matter heapt together in them, be clear'd forth, that the loſt or deprav'd Ferments be reſtor'd, that the Paſſages and Pores howſoever ſtuff't and obſtructed be open'd: For theſe ends Cathartick, Digeſtive and aperient Medicines are deſign'd.

2. When the Recrements gathered together in the Maſs of Blood, are not ſufficiently diſcharg'd by their proper Emunctories, let them be now and then led forth by other ways that are moſt proper: For this purpoſe Catharticks alſo, and likewiſe Diaphoreticks, and Diureticks are proper.

3. Let the Scorbutick Dyſcraſie of the Blood be corrected by Bleeding and Specifick Remedies; wherefore to draw all that concerns the preſervatory indication to a Head, let the Remedies, which perform its chief intents, be Catharticks, Blooding, Digeſtives, Aperients, Diaphoreticks, Diureticks, and Antiſcorbuticks,

tiſcorbuticks, or Specificks. Moreover, in regard digeſtive Remedies and Aperients are often Coincident, ſince both are chiefly Imbued with Acid, Smart, or Saline Particles; Moreover in as much as thoſe kinds of Medicines aptly enough move Sweat or Urine; therefore the Phyſical Apparatus required for the foreſaid intentions, may be brought yet to narrower limits *viz.* that it may conſiſt in a manner only of Cathartick, Digeſtive, and Antiſcorbutick Medicines, to which Bleeding is added as occaſion preſents, I muſt now ſet down certain Forms and Præſcripts of them, and likewiſe the manner of uſing them.

Catharticks.

1. LEt the method of Curing preſcrib'd almoſt to all Scorbutick perſons begin with Catharticks; for unleſs the firſt Paſſages are cleanſed, the Medicines deſign'd for any other uſes, will be depraved by the Filth in them; wherefore Vomiting ſometimes may be no leſs proper than Purging.

If the Stomach, (as it frequently happens) being loaded with a viſcous matter that turns ſour or of an ill ſavour, endeavours to diſcharge upward its depraved Burthen, by a nauſeouſneſs or ſtriving to Vomit, and the Patient has been wont formerly to undergo ſuch an Evacuation vigorouſly enough, and with a well bearing, nothing hinders, ſo the ſtrength be not too much caſt down, from giving an Emetick Medicine. To thoſe that are ſtrong, let an Infuſion of *Crocus Metallorum*, or *Mercurius Vitæ*, or the Emetick Tartar of *Mynſicht*, or *Glaubers* Sulphur of Antimony, be given. Thoſe that are of a weak or tender Conſtitution, may take Wine of Squills, or *Gilla Theophraſti*, which being given in a ſmall Doſe, let them drink a great quantity of Whey after it, and then the Ventricle being filled to a nauſeouſneſs, let a gentle Vomit be raiſed by putting the Finger or a Feather into the Throat, and let it be ſometimes repeated, as the perſon ſees good. By this manner of Vomiting, the meer Contents of the Stomach are cleans'd from its folds, and purg'd forth; neither are painful or Convulſive Twitchings cauſed in other adjacent Viſcera or Membranes, with a Swooning, as it uſually happens after Stybiate Medicines. To thoſe whoſe Stomach, by reaſon of an ill Digeſtion, ſoon gathers together a heap of Phlegm, or of other degenerate matter, I have ordered that they procure once a Month ſuch a Vomit, as being ſafe and wholſom.

Where Vomiting has no place, you muſt begin with Purging, at leaſt, ſome days being allowed betwixt whiles, let this evacuation ſucceed the other. What has been formerly inculcated by

Authors

Authors, concerning the preparation of the Humours, I judge either to be ſuperfluous, or wholly erroneous, the Circulation of the Blood being not then underſtood: but inſtead of that intention, let Medicines reſtoring the Ferments of the Viſcera, and altering the Craſis of the Blood, be ſubſtituted: Mean while for clearing away the Filth of the firſt paſſages, and the Excrementitious ſuperfluities of the Blood and Nervous Liquour, firſt, let a mild and gentle Purge be ordered, and afterward, according as the Patient bears it, let it be repeated either once within a week, or oftner or ſeldomer; and let the ſtrength of the Medicine be proportion'd according to the ſucceſs of the firſt Doſe: For this end Pills, Potions, Apozemes, Electuaries, Powders, and many other forms of Medicines are wont to be preſcrib'd.

If the Conſtitution of the Diſeas'd be hot, and the Scurvy ſeems to be founded in the Aduſt, *viz.* the Sulphureo-ſaline Dyſcraſie of the Blood, let all Medicines of *Aloes*, and *Diagridium* be avoided, and let only the more temperate be given, of Sena, Rhubarb, and other things that do not exagitate the Blood.

Take Leaves of Sena an Ounce, Rhubarb ſix Drams, Epithimum three Drams, Roots of Polipody of the Oak, and of Engliſh Rhubarb dryed of each half an Ounce, yellow Saunders two Drams, Celtick-ſpike half a Dram, Salt of wormwood two Drams, being ſlic't and brnis'd, let them digeſt in a Matrace by a Sand heat with White-wine, and Fumitory-water, of each a Pound, (or with our Magiſtral Antiſcorbutick-water two Pounds) for two days, let the clear Straining evaporate by a gentle Bath heat, to the conſiſtency of Hony; then add Powder of the Leaves of Sena and Rhubarb, of each a Dram and a half, Species Diatrion Santalon a Dram, Cream of Tartar a Dram and a half, make a Maſs for Pills; the Doſe is from half a Dram to a Dram.

Or, let ſuch an Infuſion be prepar'd, which let evaporate by a gentle heat, to the conſiſteney of a Syrup, adding towards the end Manna paſs'd through a Searce, and double refin'd Sugar, of each two Ounces, make a Syrup; the Doſe is from a Spoonful to two, with a fit Vehicle.

Or, let four or ſix Ounces of ſuch like Tincture be given for a Doſe, adding Cream of Tartar half a Dram, and if there be need of Sweetning, Syrup of Apples three Drams.

Or to the Tincture preſcrib'd, let ſix Ounces of cleans'd Corinths be put, and let there be a warm Digeſtion till the Corinths ſwell, which being taken forth, let the Liquour evaporate to the conſiſtency of a Syrup, adding Sugar and Manna paſt through a Searce, of each a Dram and a half; then the Corinths being put in again, let the

Medicine

Medicine be kept in a Glaz'd Veſſel well ſtopt; the Doſe is from a Spoonful to two.

Or, to the Tincture preſcrib'd evaporated to a half, add freſh Caſſia, Pulp of Tamarinds extracted with Antiſcorbutick-water, of each three Ounces, Conſerve of Violets and of Damask Roſes, of each two Ounces, the greater Compound Powder of Sena a Dram, Rhubarb powdred half an Ounce, Cream of Tartar, Species Diatrion Santalon, of each two Drams, let them be bruis'd together in a Stone-mortar, till they are brought to the form of an Electuary: The Doſe is the quantity of a Wallnut, more or leſs, according to the operation.

For thoſe whoſe quaint Stomach will not receive any Medicines but in a ſmall quantity, and nicely preſcrib'd. *Take Roſin of Scammony, from four Grains to eight, Cream of Tartar half a Scruple, Celtick-ſpike ſix Grains, mix them, make a Powder, let it be given in a Spoonful of Panada, or let it be made into Pills.*

To thoſe that are troubled with the Scurvy, and are of a cold Conſtitution, and the Diſeaſe ſeems to be founded in a Nitro-ſulphureous Diſpoſition of the Blood, reſembling ropy Wine, let ſmart Catharticks, and ſuch as are endow'd with hot Particles be given.

Take Pil. Stomac. cum Gum. two Drams, Roſin of Jalap twenty Grains, Tartar vitriolated ſixteen Grains, Oyl of Juniper half a Scruple, with a ſufficient quantity of Ammoniacum diſſolv'd in Water of Earth-worms, make ſixteen Pills, let four be taken at a time once a week.

Take Bontius's *Pills of Tartar a Dram and a half, Roſin of Jalap twelve Grains, Salt of Tartar half a Scruple, with a ſufficient quantity of Syrupus Anguſtanus, make twelve Pills.*

Take Extract of Pil: Ruffi a Dram, Extract of black Hellebore a Scruple, Salt of Tartar half a Dram, with a ſufficient quantity of Ammoniacum diſſolv'd, make nine Pills, let three be taken at a Doſe.

Take Leaves of Sena an Ounce, Rhubarb ſix Drams, Mechoacan, Gummous Turbith of each half an Ounce, Threads of black Hellebore three Drams, Salt of Tartar two Ounces, yellow Saunders a Dram and a half, Winters-bark two Drams, being ſlic'd and bruis'd, let them digeſt in two Pounds of White-wine for two days, ſtrain it off clear without preſſing it; let it be taken either by it ſelf, from five Ounces to ſix, or let it be made into an Extract or Syrup, or Electuary as the Tincture above preſcrib'd, adding Pulvis Arthriticus, or Diaſena what ſuffices, &c.

Or, Let a Tincture of this kind be prepar'd, which may be given to robuſt Men, to the quantity of a Spoonful, or of a Spoonful and a half. Take Salt of Tartar an Ounce, ſmall Spirit of Wine a Pound and a half, let them digeſt till it turns yellow: To this being pour'd

off

of the Faces by inclination, infuſe Leaves of black Hellebore macerated in Vinegar an Ounce; yellow Saunders a Dram, the yellow Coats of Oranges a Dram and a half, make a warm and cloſe Digeſtion for three days: Let the clear Straining be diſtil'd in Balneo to a half, let the remaining Liquour be kept for uſe.

Take Roots of ſharp pointed Dock, Polipody of the Oak, ſtinging Nettles, Chervil, of each ſix Drams, Leaves of Agrimony, Speedwel of each a handful, white and yellow Saunders, of each a Dram and a half, baſtard Saffron an Ounce, Tartar of White-wine half an Ounce; let them boil in two Pounds and a half of Fountain-water, till a half be waſted, add of Rheniſh-Wine a Pound, and ſtrain it preſently, into which put of the beſt Sena half an Ounce, Rhubarb ſix Drams, Leaves of black Hellebore half an Ounce, the yellow Coats of Oranges two Drams, make a cloſe and warm Infuſion for twelve hours, let the Straining be kept in a ſtopt Glaſs; the Doſe is from five Drams to ſix.

It were eaſie to ſet down here many other forms of Cathartick, but there is no great variety requir'd in theſe: But of the foregoing, let theſe or the others be given as they beſt agree, and now and then, let them be repeated within five or ſix days, as occaſion requires. An over frequent and violent Purging caſts down the powers of the Body, greatly impairs the ſtrength of the Viſcera, and in the mean time, does not take away the Diſeaſe.

After a Purge or two, if Bleeding be indicated, let Blood be drawn from the Arm, or from the Veſſels of the Fundament by Leeches: It matters not much, which Vein be open'd, nor is the opening of the *Salvatella* Vein of as much moment as it is ſaid: As to the large Diſcourſes made by Authors, concerning the opening of the Liver or Cephalick Veins, rather than any others in the Scurvy, ſince the Circulation of the Blood has been known, it comes to nothing. Phlebotomy is indicated by a plenty and vitiouſneſs of the Blood, which it is better to let forth at ſeveral times in a ſmall quantity, than at once in a great: For when the Liquour of the Blood is become very impure, it is corrected by no kind of Remedy, more certainly than by a frequent and ſpare letting of it forth; for the old corrupted Blood, as often as it is drawn forth, is ſucceeded by a better and clearer freſh Blood; mean while there is need of caution, that it be not drawn away at once in too great a quantity, for its ſtore being much drain'd together, Sanguification fails, ſo that a Dropſy or Cachexia enſues.

Beſides Purging, and (if need be) opening a Vein, many Remedies of another kind, no leſs neceſſary, are requir'd in the Scurvy: And that they may be preſcrib'd in order, we muſt

forthwith consider, whether only Preservatory Indications have place here, and whether certain Curatory Indications, *viz.* such as have regard to some severely pressing Symptoms, ought not to be interchangeably pursued with them: And if you are to imploy the whole work of the Cure against the cause of the Disease, you may proceed after the following method: We shall shew you hereafter, what sort of Cure is to be apply'd to Symptoms (if haply occasion requires it.)

Therefore if nothing hinders, but you are to imploy the chiefest stress of Physick, in rooting out the cause of the Disease, principally and by it self; for this purpose, let Digestives likewise, and Specificks, or Antiscorbuticks, as we hinted before, be us'd at all times, unless on the days of Purging: To which sometimes, if it be needful, let Diaphoreticks or Diureticks be added: Manifold forms and prescripts of Medicines, and of various kinds for performing these intents, are every where to be found amongst Authors: I shall here set down some of the more choice of them, which I here thought good to distribute into two ranks, according to the twofold nature of the Scorbutick Cause. *viz.* the Sulphureo-saline, and Salino-sulphureous Dyscrasies of the Blood. And first I shall deliver such as are proper in this latter kind of affect, *viz.* where there is need of Medicines, endow'd with a certain instigating vertue, and such as are very much fill'd with a Volatile Salt.

Let Digestive Medicines that restore the Ferment of the Stomach, and help the Functions of that, and of other of the Viscera, which serve for Chylification, and Anti-Scorbuticks, or Specificks, which take away the Dyscrasy of the Blood, either be joined in the same Composition, or at leastwise let them be taken the same day one after the other.

Among digestive Remedies are justly counted the *Cream, Crystals, Salt,* and *Tincture of Tartar*; *Tartar Vitriolated* and *Chalybeated, Elixir Proprietatis, the simple mixture.* The use of each of these, given twice a day, oftentimes does good.

Moreover you may easily make Magistral Tinctures and Elixirs of various kinds, both digestive and appropriated to the Scurvy, with the two following *Menstruums.*

Take rectified Spirit of Vitriol, Six Ounces; Spirit of Wine Alcholized, sixteen Ounces; mix them, and Distill them in a Glass retort with three Cohobations; keep it for use in a Glass well stopt. Elixir Proprietatis is more easily and better prepar'd with this Compound Menstruum than the vulgar way.

Take Winters-bark, Lignum Aloes, Roots of the lesser Galingal, of each two Drams; Cinnamon, Cloves, Cubebs, of each a Dram; Seeds of Bishops-weed and Watercresses, of each half a Dram; being bruised,

pour

pour to them of the foreſaid Menſtruum enough to cover them three Fingers over; let them digeſt in a Matrace in a Sand Furnace for ſix days; let the ſtraining be kept in a Glaſs cloſe ſtopt: The Doſe is twenty Drops, more or leſs, in a Spoonfull of Canary, or of an appropriated Liquor. Let it be given twice a day.

Take white Amber, Gum of Ivy, Caranna, Tacamahaca, of each a Dram; Saffron, half a Dram; Cloves, Nutmegs, of each two Scruples; being bruiſed, pour to them the aforeſaid Menſtruum, and let a Tincture be extracted according to Art. The Doſe is twenty Drops, as above.

Take blew Salt of Tartar, four Ounces; let it digeſt in a Matrace with a Pound of Spirit of Wine Alcholized, till a Tincture be extracted: Let this be another Menſtruum, with which you may prepare Elixirs out of Gums, Spices, &c. after the ſame manner as with the former Menſtruum.

While theſe kinds of Medicines are given in a ſmall Doſe, in the Evening and early in the Morning, at Phyſical hours, *viz.* at eight a Clock in the Forenoon, and at four in the Afternoon, let the Antiſcorbutick Medicines of the other kind be taken, which for the moſt part we are wont to preſcribe in a twofold form, *viz.* in a ſolid form and a liquid, to be taken all under one; ſo that the ſolid Medicine being taken firſt, the liquid is drank after it: there are various kinds and ways of Compoſition of both, *viz.* in a ſolid form, Electuaries, Confections, Powders, Pills and Tablets; in a liquid form are Decoctions, Infuſions, Expreſſions, Diſtill'd Waters, Phyſick Wines, and Ales. We ſhall give you ſome of the more ſelect Medicines of each of theſe kinds.

Electuaries.

TAke Conſerve of Scurvy-graſs, Roman Wormwood, Fumitory, of each two Ounces, Powder of Winters-bark, Roots of Angelica, and Aron, of each two Drams; Species Diatrion Santalon, a Dram and a half; Powder of Crabs-eyes, a Dram; Salt of Wormwood, two Drams; with a ſufficient quantity of Syrup of the Juice of Citrons; make an Electuary.

Take Conſerve of the Leaves of Scurvy-graſs and Brooklimes made with an equal quantity of Sugar, of each three Ounces; Troches of Capers, and of Rhubarb, of each two Drams; Salt of Wormwood, and of Scurvy-graſs, of each a Dram; Ivory powdered, Coral Calcined, of each a Dram, with a ſufficient quantity of ſyrup of the Juice of Scurvy-graſs: Make an Electuary.

I uſe to preſcribe the Conſerves of the outward Coats of Limons and Oranges, alſo of the purple Flowers of the Aſh-tree, of the Leaves

and Flowers of Lady-ſmocks, of the Roots of ſharp pointed Docks, and of Engliſh Rhubarb, to be prepared with an equal quantity of Sugar, which being mixt between themſelves, or with other Conſerves and Species, enter theſe kinds of Electuaries.

Take Conſerves of the Yellow-coats of Oranges and Limons, of Flowers of the Aſh, of each two Ounces, Powder of the Roots of Contrayerva a Dram and a half, of the leſſer Galingal half a Dram, Roots of Aron two Drams, Species of Aromaticum Roſatum a Dram, Salt of Wormwood two Drams, with a ſufficient quantity of Syrupe of the Confiture of Nutmegs make an Electuary. The Doſe of theſe kinds of Medicines is the quantity of a Nutmeg, drinking after it an appropriated Liquor.

To Ruſticks and poor People, by whom Medicines eaſily prepar'd and cheaper are deſir'd, I preſcribe after this manner. *Take Leaves of Scurvy-graſs and Brooklimes of each four Ounces, double refin'd Sugar eight Ounces, let them be bruis'd together in a Mortar, adding Powder of Winters Bark half an Ounce, Tartar Calcin'd with Nitre three Drams, with a ſufficient quantity of Spaniſh Wine let them be made into an Electuary. The Doſe is the quantity of a Nutmeg twice a day, drinking after it an appropriated Liquor.*

Take Leaves of Scurvy-graſs a pound; Raiſins ſton'd, double refin'd Sugar, of each half a pound, Fæcula of the Roots of Horſe-raddiſh two Ounces; let them be bruis'd together in a Mortar, and made into the Form of an Electuary. The Doſe is the quantity of a Wall-nut, twice or thrice a day.

Confections.

TAke Powder of Aron Roots compound an Ounce, Winters-bark Powdred half an Ounce, Species Diatrion Santalon, Troches of Capers of each two Drams, Salt of Wormwood, and of Scurvy-graſs of each a Dram and a half, the Yellow Coats of Oranges preſerv'd three Ounces, let them be bruiſed together in a Mortar, then add of double refin'd Sugar diſſolv'd in a ſufficient quantity of Water of Earth-worms, three Ounces; make a Confection according to Art.

Take Roots of Eringo and Scorzonera preſerv'd of each two Drams, Wallnuts preſerv'd and Mirobalanes Condited of each in number two, the Electuary of Saſſaphras ſix Drams, Powder of Cubebs and Cardamoms of each two Drams, Powder of the Roots of Zedoaria and Angelica of each a Dram and a half; Salt of Woormwood two Drams; with a ſufficient quantity of Syrup of the Confiture of Wallnuts make a Confection.

Take Powder of China Roots, of the Wood Saſſaphras of each half

half an Ounce, Yellow and White Saunders of each two Drams, Seeds of Rocket, Cubebs, Garden-cresses, Grains of Paradise, of each a Dram and a half, Species of Dialacca, Cinnamon, Orrice, the lesser Galingal of each a Dram, Salt of Wormwood two Drams, Conserve of the Yellow Coats of Oranges, and Sugar of Rosemary Flowers dissolv'd in a sufficient quantity of Water of Snails, of each three Ounces; make a Confection according to art; the Dose is the quantity of a Nutmeg twice a day, drinking after it an appropriated Liquor.

In some cases of the Scurvy where the use of *Steel* is indicated, either let *three Drams of Steel prepar'd with Sulphur*, or *two Drams of Vitriol of Mars* be added to each of the prescripts either to the Confection, or to the Electuary, and after the taking of the Medicines once or twice a day, let the body be exercis'd according as the strength will bear.

Powders.

TAke Powder of Aron Compound an Ounce and a half, Winters Bark half an Ounce, Cubebs, Grains of Paradise, Cardamoms of each two Drams, Salt of Wormwood, three Drams, Tablets of Oranges three Ounces; make a Powder, the Dose is a Dram in an appropriated Liquor.

To the forelaid Powder add Kernels of the Indian Chocholate Nut half a Pound, let them be brought into a Mass, or Paste in a warm Mortar. The Dose is two Drams, after the manner that the Confection of Chocolate is taken, viz. in Fountain Water with the leaves of Rosemary, or of Betony, or the Root of Scorzonera, or also the shaving of Ivory or of Harts-horn boyl'd in it.

Pills.

FOr those to whom a Medicine in a less Dose, and in a form of Pills is more pleasing. *Take Roots of Virginia Serpentary, of Contrayerva, of each two Drams, Winters Bark, Cubebs, Rockes Seeds, of each three Drams, Salt of Wormwood, and of Scurvy-Grass of each a Dram and a half, Extract or Rob of Juniper half an Ounce; with a sufficient quantity of Syrupe of the Confiture of Nutmegs, make a Mass. The Dose is four Pills twice a day, drinking after it an appropriated Liquor.*

Tab.

Tablets.

For nice persons let *Tablets* or *Tragæa's* be prescrib'd after this manner: *Take Powder of Winters Bark, of Crabs eyes, of each a Dram and a half, Pearl powdred half a Dram, double refin'd Sugar dissolv'd in a sufficient quantity of water of Earth-worms, and Boyl'd to a Consistency for Tablets, Six Ounces, Spirit of Scurvy-grass two Drams; make Tablets according to Art each weighing half a Dram. Let about half a Dram be taken twice a day, drinking after it an appropriated Liquor.*

Tablets of Oranges which are to be sold by the *Oxford* Apothecaries.

Take Rinds of Oranges, Limons, Citrons preserv'd of each an Ounce, preserv'd Eringoes half an Ounce, Pine-Nut Kernels, Fistick Nuts of each twenty, Sweet Almonds blancht in number ten, Annise Seed Powdred half an Ounce, Ginger Candied two Ounces, Species of Aromaticum Rosatum, Nutmegs of each a Dram and a half, Roots of Galingal a Dram, Cloves in number ten, Ambergreice four Grains, Musk, Civet of each two Grains, double refin'd Sugar dissolv'd in Rose-water, and Boyl'd to a Consistency for Tablets a Pound and a half; make Tablets according to Art.

So much of Medicines which are wont to be given to Scorbutical Persons in a solid form, or in a gross substance: and that their vertue may be convey'd the better into the Mass of Blood and with more benefit, Liquids are prescrib'd for the most part to be drank after them. Though there be a great variety of these, and a diversifyed way of their composition, yet the chief and most usual are such as we have hinted before, and of each of which we shall now give you forms.

Decoctions.

Though Decoctions are a very familiar kind of Liquid Medicines, yet they are seldom us'd in the Scurvy, because the Simples, which chiefly do good in this Disease, lose their vertues, which they have from the volatile Salt, by Boyling: Nevertheless because remedies are easily and soon prepar'd after this manner, they ought sometimes to be admitted; nay and experience has shewn that some of them are efficacious. For

Rusticks

Ruſticks and poor people this Medicine of a very eaſie preparation is commended by many. *Take Leaves of Water-creſſes three handfuls, of the leſſer Sorrel two handfuls; being ſlic't, let them be macerated in ſix Pounds of Milk, and let them boil to a conſumption of a third part; let it be taken twice a day, from four Ounces to eight.* The *Decoction of Worm-wood* is commended by *Eugalenus* and others. I have often tryed the following Medicine with good ſucceſs. *Take Broom tops three handfuls, being ſlic't ſmall, let them boil in three Pounds of ſtrong Beer to a half, let it be given from two Ounces to three twice a day,*

2. *Infuſions.*

AN Infuſion added to a Decoction, makes a very profitable Medicine. *Take Roots of Scorzonera and Chervil, of each an Ounce, Leaves of Agrimony and Ground-pine, of each half a handful; burnt Harts-horn two Drams, Raiſins half a handful; let them boil in three Pounds of Fountain-water till a third part be conſum'd: Add of Rheniſh-wine half a Pound, and preſently let it be ſtrain'd into a glaſs Veſſel, to which put Leaves of Scurvy-graſs and Brook-limes bruis'd, of each half a handful, Orange Pills preſerv'd and ſlic't ſmall half an Ounce; make a cloſe and warm Infuſion for ſix hours; let the ſtraining be kept in ſtopt Veſſels. The Doſe is ſix Ounces twice a day after a ſolid Medicine.*

Take Whey made with White-wine or Cider a Pound and a half, in this boil Roots of Bur-dock, and candied Eringo's, of each ſix Drams, Juniper-berries preſerv'd half an Ounce. Let the Liquour, being boil'd away to the conſumption of a third part, be ſtrain'd into a Flagon, to which put Leaves of Scurvy-graſs and Brook-limes, of each a handful, make a warm and cloſe Infuſion for ſix hours. The Doſe is half a Pound twice a day after a ſolid Medicine.

Infuſions alſo made by themſelves, are ſometimes of excellent uſe. *Take Leaves of Scurvy-graſs a handful, Raſpings of the Root of Horſe-raddiſh half a handful, Winters-bark bruis'd two Drams; let them be put in a Glaſs with White-wine or Cider, and water of Scurvy-graſs, of each a Pound, let them infuſe in a Cellar for two or three days. The Doſe is from ſix Ounces to eight twice a day, as above.*

3. *Juices and Expreſſions.*

THE moſt commendable uſe of Antiſcorbutick Herbs and Fruits is, that their Juices and Expreſſions be taken by them-

themſelves, or with other appropriated Liquours twice or thrice a day: For ſo the entire and pure Vertue of the Remedy is preſum'd to be given.

Take Leaves of Scurvy-graſs, Water-creſſes, Brook-limes, of each three handfuls; being bruis'd, let the Juice be preſt forth, and be kept in a Glaſs well ſtopt. The Doſe is from an Ounce and a half, to three Ounces twice a day in a little draught of Beer, Wine, or diſtil'd Water.

Take Leaves of Scurvy-graſs four handfuls, of Wood-ſorrel two handfuls, being bruis'd, let the Juice be expreſt, which being put in a Glaſs and well ſtopt, will ſoon become clear, for the Acidity of the Wood-ſorrel precipitates the groſſer parts of the Scurvy-graſs: The ſame thing comes to paſs if the Juice of Oranges be mixt with the Juice of Scurvy-graſs. The Doſe is two or three Ounces twice a day.

Takes Leaves of Scurvy-graſs four handfuls, of Brook-limes and Garden-creſſes of each two handfuls, long Pepper three Drams, Raſpings of Horſe-raddiſh two Ounces; being all bruis'd together, let them be put in a Glaz'd Pot with two Pounds of Rheniſh-wine, or of Sack, if it be thought better: The Orifice being well ſtopt, let them ſtand in a cold Cellar for two days, then expreſs it ſtrongly; the Doſe is three Ounces twice a day, after a ſolid Medicine.

Take Leaves of Scurvy-graſs three handfuls, of Brook-limes, Garden-creſs and Wood-ſorrel, of each a handful, being bruis'd, pour to them Water of Snails and of Earth-worms, of each ſix Ounces, make a ſtrong Expreſſion, and keep it in a Glaſs well ſtopt. The Doſe is two Ounces twice a day.

4. *Syrups.*

FOR the ſame reaſon as Decoctions, Syrups alſo are diſapprov'd of in the Scurvy, *viz.* in as much as the vertue of the moſt efficacious Simples, evaporates in boyling: Yet becauſe ſometimes there ſeems need of ſuch a Medicine for ſweetning appropriated Medicines for ſome perſons, we ſhall here propoſe our preparation, the Vertues of the Ingredients being preſerv'd as much as may be.

Therefore take Leaves of Garden Scurvy-graſs ſix handfuls, the Coats of four Oranges, and of two Limons thinly par'd off, the Raſpings of Raddiſh-roots half a handful, long Pepper powdred three Drams, all of them being bruis'd together, let the Juice be expreſt, which preſently being put in a Glaſs and well ſtopt, let it be ſet in a cold Cellar till it becomes clear by ſubſiding: Then let the clear Liquour be pour'd off into another Glaſs by inclination, and being ſtopt,

let

let it be kept in the heat of a Balneum Mariæ. Mean while for each Ounce of it, take of Sugar an Ounce and a half, and let its whole quantity, diſſolv'd with a little Water of Earth-worms, be boil'd to a conſiſtency for Tablets, to which, preſently let the foreſaid Liquour whilſt warm, be pour'd by little and little, and let it be ſtir'd with a Spatula; aſſoon as it is intorporated, let the compoſition be taken from the Fire, and being cold, let it be put into a Glaſs: Let this Nodulus be hung in the Glaſs. Take Cinnamon bruis'd, a Dram and a half, Seeds of Garden-creſs, and of Rocket powdred, of each an Ounce, mix them.

5. *Diſtil'd Waters.*

Diſtil'd Waters, becauſe they are a neat and pleaſant Remedy, are in a manner all in all amongſt Antiſcorbutick preſcripts, ſome very profitable and neat Diſpenſations of theſe are contained in our Diſpenſatory, as are *Radiſh-water compound*, the *Magiſtral Waters of Snails*, and of *Earth-worms*: Moreover there are famous Preſcripts of theſe kinds of Waters, delivered by *Quercetan*, *Dorncrelius*, *Sennertus*, *Doringius*, and other Authors. It's alſo eaſie for every Phyſitian to preſcribe ſuch appropriated to the condition of each Patient, as occaſion requires: For Antiſcorbutick Ingredients, and likewiſe ſuch as regard certain Accidents and particular Affects are taken, to which, being ſlic't and bruis'd, a fit Liquour, *viz.* White-wine, Cider or Whey prepar'd of either, is pour'd: Then the whole mixture is diſtil'd in a Cucurbit, or in a Roſe-ſtill: I ſhall here give you a form or two of ſuch as we commonly uſe.

Take Leaves of both Scurvy-graſſes, Brook-limes, Water-creſſes, tops of Broom, of each four handfuls, Leaves of Germander and Ground-pine, of each two handfuls, Roots of Horſe-raddiſh half a Pound, of Aron, Angelica, Maſter-wort, of each four Ounces, the outward Coati of four Oranges, and of as many Limons, Roots of Calamus Aromaticus, an Ounce; Cinnamon, Cloves, of each half an Ounce, being ſlic't and bruis'd, pour to them of the beſt Cider eight Pounds, let them digeſt for two days in a Glaz'd Pot cloſe luted: Afterward diſtil them in a common Diſtillatory, let the Waters firſt and laſt drawn, be mixt.

In the Winter ſeaſon, when green Herbs are ſcarce, we may preſcribe after this manner. *Take Leaves of Scurvy-graſs four handfuls, tops of Broom, of the Pine-tree, and of Juniper, of each three handfuls, the Middle-bark of Elder and Aſh, of each four Ounces, Roots of Horſe-raddiſh, and of Polipody of the Oak, of each three Ounces, the Rinds of four Oranges, and of as many Limons,*

Winters-bark four Ounces, being ſlic't and bruis'd, pour to them of White-wine, or of Cider, or of Whey made with either of them, eight Pounds, let them be diſtil'd.

The ſimple Water of the Leaves of Aron, diſtil'd in the Spring time, is an efficacious Remedy againſt the Scurvy, if three or four Ounces are given twice a day, with another Medicine.

The ſimple Water of Scurvy-graſs, pour'd again on freſh Leaves bruis'd, and diſtil'd, and ſo iterated by frequent Cohobations, becomes an efficacious Remedy. Moreover a hot Spirit of Scurvy-graſs is prepar'd after this manner. Take Leaves of Scurvy-graſs what ſuffices, being bruis'd, let it be made into Balls, ſuch as are made of Woad for Dying: Then let thoſe Balls be kept in a Glaz'd Pot for three or four days very cloſe ſtopt in a cold place, either Water of Scurvy-graſs, or Wine of the ſame being pour'd to them, and covering them over above four fingers deep: Then an Alembick being put on, let the whole matter be diſtill'd: Let the diſtill'd Water being put into a Cucurbit, be rectified; the hot Spirit will come off firſt, whereof let fifteen or twenty drops be taken in a fit Vehicle.

6. *Antiſcorbutick Wines and Beers.*

I Uſe to prepare a ſimple Antiſcorbutick Wine of excellent uſe, after this manner: In the Spring or Summer-ſeaſon, *Take Leaves of Scurvy-Graſs gathered in clear and dry Weather, what you think good; being bruiſed, let the Juice be preſt forth, and let a Veſſel containing three or four Gallons be fill'd; a ſpoonful or two of Teſt being put to it, let it ferment for two Days; then the Veſſel being cloſe ſtopt, let it be plac't in a Wine-Cellar for ſix Months; and then let the clear Liquor, which will be of an Amber colour, like* Spaniſh *Wine, be drawn out into Bottles, and be kept for uſe; it continues good many years: The Doſe is three or four Ounces twice a Day.*

Phyſick Wines, whereof a Glaſs or two may be daily taken at Phyſical Hours, or alſo at Dinner, may be prepar'd after this manner; *Take Leaves of Scurvy-Graſs, four handfuls, Raſpings of Horſe-radiſh, four Ounces; Winters-bark bruiſed half an Ounce; the outward Coats of four Oranges, and of ſo many Limons; Let them be put in a Glaſs, with twelve Pounds of White Wine or Rheniſh, or ſmall* Spaniſh *Wine: The Veſſel being ſtopt, let it be kept in a cold place. Let the Wine be pour'd off clear as often as you uſe it.*

It's more uſual to preſcribe a Phyſick Ale or Beer to Scorbutical perſons, to be drank conſtantly for their ordinary Drink. *Let Beer be prepar'd to fill a Veſſel of four Gallons; inſtead of Hops let three Handfuls of Pine or Fir-tops be boiled in it: After it has wrought in the Veſſel, put into it Leaves of Scurvy Graſs, three Handfuls;*

Roots

Roots of ſharp pointed Dock prepared, four Ounces; the Rinds of four Oranges: After it has ſtood a Week to clear, let it be expos'd to Drink.

Theſe kinds of Phyſick Drinks, with other Ingredients, may be variouſly prepar'd, according to the Temperament and Affect of the Patient; by which kind of Remedy, in regard the Phyſical Particles, altering the Dyſcraſy of the Blood, are forthwith convey'd into its Maſs, together with thoſe of the Food, often much good is done in removing the Cauſe of the Scurvy: But ſince we have ſhewn the cauſe of this, as alſo the Nature of the Diſeaſe, to be twofold, and ſince the Medicines hitherto propoſed regard in a manner only the Salino-ſulphureous Diſtemper of the Blood, we muſt next direct Medicines which are proper in the other, *viz.* the Sulphureo-ſaline Dyſcraſy of the Blood.

CHAP. III.

Of Medicines of each kind of the foregoing forms, which have regard to the Scurvy raiſed in a hot Conſtitution, and in a Sulphureo-Saline Dyſcraſy of the Blood.

IN certain Scorbutical perſons the uſe of Scurvy-graſs, Horſe-Radiſh, Winters-bark, and of other ſmart things, and ſuch as are greatly endow'd with a volatile Salt, is found to be very offenſive; wherefore in thoſe kinds of caſes, where the Morbifick Cauſe conſiſts in a hot Dyſcraſy of the Blood, reſembling *over-fretted Wine*, temperate Medicines, and ſuch as do not exagitate the Particles of the Humours, which are apt to boil too much of themſelves, are indicated: Wherefore we ſhall ſet down Forms after the ſame order, and running as it were parallel with thoſe before; and in the firſt place we ſhall give you ſolid Medicines.

Electuaries.

Take Conſerve of Brooklimes and Cuckow-Flower, made with an equal part of Sugar of each three Ounces, Species Diatrion Santalon, Diarrhodon Abbatis, of each a Dram and a half; Ivory powdered, a

Dram; Pearl, half a Dram; Salt of Wormwood and of Tamarisk, of each a Dram; with a sufficient quantity of syrup of Coral: make an Electuary.

Take Conserve of Wood-sorrel, and of Hips, of each three Ounces, (or Conserve of the Roots of sharp pointed Dock and of the Roots of Cichory, of each three Ounces) Troches of Rhubarb, two Drams; Species Diamargariti Frigidi, a Dram and a half; Bark of Tamerisk, a Dram; Sal Prunella, a Dram and a half; Myrobalanes condited, in number two; with a sufficient quantity of the syrup of the Confiture of Mirobalanes, make an Electuary.

For poor people I use to prescribe this easy prepar'd Electuary, *Take Leaves of Brooklimes, six Ounces; of Wood-sorrel, two Ounces; double refined Sugar, eight Ounces; let them be pounded, adding Powder of sweet Fennel-seeds, half an Ounce; Ivory powdered, two Drams; Sal Prunella, a Dram and a half; with a sufficient quantity of Syrup of the Juice of Brooklimes, make an Electuary.*

Confections.

TAke Powder of the Roots of China, and of the Male Peony, of each a Dram; white and yellow Saunders, of each three Drams; Ivory, a Dram and a half; Pearl, half a Dram; Crabs-eyes, a Dram; Coral moistened with Juice of Oranges, and ground on a Marble, two Drams; white Tartar, a Dram and a half; double refined Sugar, dissolved in a sufficient quantity of compound Scordium Water, six Ounces: Make a Confection.

Take Roots of Eringo, and Scorzonera preserv'd, of each three Ounces, Powder of Aron-roots compound, half an Ounce; Species Diatrion Santalon, two Drams; Sal Prunella, a Dram and a half; with a sufficient quantity of syrup of Clove-Gilli-flowers: Make a Confection.

Powders.

TAke Powder of the Leaves of Ground-Pine, of Aron-roots Compound, of each an Ounce and a half; Ivory powdered, red Coral prepared with Juice of Oranges, of each two Drams; Tablets of Oranges, two Ounces; mix them: Make a Powder. The Dose is a Spoonful twice a day.

Pills.

Pills.

TAke Species Diatrion Santalon, and Diamargariti Frigidi, of each two Drams; Seeds of Citrons, and of Cardus bruised, of each a Dram and a half; Roots of Bastard-Dittany, and of Male-Peony, of each a Dram and a half; Salt of Tamerisk, two Drams; with a sufficient quantity of the Gelly of Harts-horn, or of the cast skins of Snakes: Make a Mass.

Tablets.

TAke Species Diatrion Santalon, and Diamargariti Frigidi, of each a Dram and a half; Pearl powdered, red Coral prepar'd, Ivory powdered, of each a Dram; Sugar dissolved in Scordium-water, and boiled to a Consistency for Tablets, six Ounces: Make Tablets according to Art.

But if with those kinds of temperate Antiscorbuticks, the use of Steel be indicated, to the Electuary, or to the Confection, or also to the Mass of Pills, let two Drams of *Mynsicht's Magistery of Mars*, or of *Extract of Steel of our preparation*, be added. In some cases, about two Drams and a half, or three Drams of *Crocus Martis* may be added to such a Composition: though it is often better to make the Liquors which are drank after solid Medicines Chalybeate, than the foresaid Compositions. It remains for us now to prescribe forms of Liquors.

Decoctions.

IN a Scurvy raised after a long Fever, these kinds of Decoctions, which purifie the Blood, and plentifully move Urine, are given with good effect.

Take Roots of Chervil, Scorzonera, Sorrel, Stone-Parsley, of each an Ounce; Leaves of Agrimony and Harts-tongue, of each a Handful; burnt Harts-horn, two Drams; Parings of three Apples; Corinths, two Ounces; Liquorice, three Drams; Let them boil in four Pounds of Fountain Water till a third part be consumed; add Sal Prunella, two or three Drams: The Dose is four Ounces twice or thrice a day. Take Eringo Roots preserv'd, six Drams, of Grass, two Drams, Leaves of Clivers, two handfuls; Agrimony and Liverwort, of each a handful; Raisins, two Ounces; white Saunders, a Dram; Liquorice, two Drams;

Drams; let them boil in four Pounds of Fountain Water, till a third part be consumed. The Dose is six Drams after a solid Medicine.

To Rusticks and poor People, left after a Fever they fall into the Scurvy, I use to prescribe, That twice a day they take the following Draught, *viz. That they boil a handful and a half of the Roots and Leaves of Dandelion in a Pound and a half of Posset-Drink, till a third part be consumed: Strain it for two Doses.*

Or, take Roots of Dandelion, half a handful; Seeds of Citrons, and of Carduus, of each a Dram: let them boil in Posset-drink, made with Apples, or a Pound and a half of Cyder, till a third part be consum'd.

Infusions.

THe Apozems even now prescrib'd, will become more excellent, against the Scurvy, if being prepar'd without Licorice, they are strain'd into a Flaggon, into which are put Leaves of Brook-limes, and of Water-cresses or Cuckow-flowers, of each a handful, then make a warm and close Infusion for six hours; the Liquour being strain'd again, let it be kept in stopt Vessels. The Dose is six Ounces twice or thrice a day. Also let Whey, with the Roots of Dandelion, and the Leaves of Fumitory boil'd in it, be strain'd into a Vessel, wherein are Leaves of Brook-limes, and of small Celandine, of each a handful, make an Infusion, &c.

Chalibeat Infusions are wont to be frequently in use, *viz.* the *Salt, Magistery,* or *Extract of Steel,* are infus'd in some Decoction, or distil'd Water: Moreover as natural *Spaw-waters,* so also Artificial ones of our preparation of Steel dissolv'd in Fountain-water, and impregnated with the Iususion of Antiscorbuticks, are drank with great benefit.

Juices and Expressions.

TAke Leaves of Brook-limes and Water-cresses, of each four handfuls, of Wood-sorrel two handfuls, being bruis'd; let the Juice be prest forth, being stopt in a Glass, it will soon become clear by subsiding. The Dose is from an Ounce and a half to two Ounces with a fit Vehicle.

Take Leaves of Brook-limes four handfuls, stalks of English-rhubarb two handfuls, being bruis'd; let the Juice be prest forth.

Take Leaves of Brook-limes, Garden-cress, Cuckow-flower, the lesser Celandine, Wood-sorrel, of each two handfuls, being bruis'd; let

let the Juice be preſt forth; add Juice of Oranges a fourth part; let it be kept in a Glaſs.

Syrups.

AS often as a Syrup is requir'd to be added to any other Compoſition, we uſe either *Syrup of the Juice of Wood-ſorrel, or of Fumitory, or of Coral compound*: Or alſo a Magiſtral Syrup may be prepar'd of the Juice of Brook-limes, after the ſame manner as is preſcrib'd above concerning the Juice of Scurvy-graſs.

Diſtil'd Waters.

TEmperate Diſtil'd Waters are prepar'd by changing either the Ingredients, or the Menſtruum, or both of them together.

As to the former we proceed after this mnner. *Take Leaves of Brook-limes, Garden-creſs, Fumitory, Harts-tongue, Liver-wort, Bawm, tops of Tamariſk and of Cypreſs, of each three handfuls, all the Saunders bruis'd, of each half an Ounce, Roots of ſharp pointed Dock, of Polipody of the Oak, of each two Ounces, the outward Coats of four Oranges, Snails cleans'd two Pounds; being ſlic't and bruis'd, pour to them Whey made with Cider ſix Pounds; let them be diſtil'd in a common Still.*

2. When the Menſtruum is weak, let the Ingredients be moderately hot.

Take Leaves of Scurvy-graſs, Brook-limes, Cuckow-flower, Garden-creſs, of each three handfuls, Rinds of four Oranges, Snails a Pound: being ſlic't ſmall, pour to them common Whey, or freſh Milk ſix Pounds; diſtill them after the vulgar manner.

3. In a Scorbutick Atrophia, and Conſumptive Diſpoſition, where nothing hot, that may ſtir the Blood and Humours, and Spirits, ought to be admitted, let both the Ingredients and Menſtruum be temperate, and lenifiers of the Blood.

Take Leaves of Brook-limes, Cuckow-flower, Harts-tongue, Maiden-hair, Liver-wort, Speedwel, Agrimony, of each two handfuls, Snails cleans'd a Pound and a half (or the Pulp of a Capon, or of a Sheeps-heart ſlic't) all being half boil'd and ſlic't, pour to them of freſh Milk (or Water of Fumitory) ſix Pounds; let them be diſtil'd the common way.

Phyſick

Phyſick-wines and Beers.

THough the uſe of Wines may not ſeem proper in a Scurvy rais'd by reaſon of a hot, or Sulphureo-ſaline Dyſcraſie of the Blood, nevertheleſs, if at any time the Stomach either being weak, or a long accuſtomance require the drinking of Wine, at leaſtwiſe being diluted with Water; a Liquour of that kind being both temperate, and in ſome meaſure Phyſical, may be prepar'd: For eſpecially ſmall Wines diluted with Water, and impregnated with the Infuſion of Bawm, Borrage, or of Burnet, or other things ought to be allow'd.

Moreover let *Wines* be prepar'd of the Jüice of Engliſh *Corinths, Cherries,* and *other horary Fruits;* which when they are brought to a ripeneſs by Fermentation, are very grateful to the Stomach, and purifie the Blood: Again *Cider,* the familiar and genuine Wine, as it were, of our Country, ſo it be clean, mellow, and pleaſant without any ſharpneſs, does very much good in the Scurvy. Moreover in this Liquour drawn from the Lees, and put in ſmall Veſſels, Ingredients of various kinds may be infus'd: Of which kind are *tops of the Pine-tree, or of Fir, Flowers of Tamarisk; alſo ſhavings of Harts-horn, or of Ivory,* which ſweeten the Liquour, and preſerve it from turning ſour; *viz.* in as much as the Particles of the fluid Salt which abound in the Cider, and are apt to make it ſharp, are taken up in diſſolving the foreſaid Ingredients.

Temperate Phyſick Drinks may be preſcrib'd after this manner, viz. *let a ſmall Ale be prepar'd to fill a Veſſel of five or ſix Gallons; into which inſtead of Hops, let tops of the Pine-tree, of Firr or Tamarisk, or the Raſpings of either of their Woods be put; then after it has wrought, let the Roots of ſharp pointed Dock dryed, be put into the Veſſel (than which certainly there is no Remedy more excellent in the Scurvy: To theſe, ſometimes let the Leaves of Brook-limes, Water-creſſes, Winter-creſſes,* &c. *be added: Alſo Pomecitrons or Oranges cut in ſlices.*

Leaves of Harts-tongue, put into a little Veſſel of midling Ale after it has wrought, gives it a grateful ſavour and odour.

CHAP.

CHAP. IV.

Of the Curatory Indication of the Scurvy, whereby we obviate the Diſeaſe it ſelf, and the Symptoms that are moſt preſſing.

HItherto we have ſhewn concerning the Cure of the Scurvy, what regards the Preſervatory Indication, to wit, the removal of the Morbifick Cauſe, *viz.* both the intentions of Curing, and the Remedies indicated: Which kind of method being ſeaſonably begun, and duly proſecuted, often does the whole work; *viz.* in as much as the Cauſe of the Diſeaſe, or the Root of it being cut off, the affects depending of it dye of their own accord: Nevertheleſs we muſt not go on with this courſe of Phyſick always directly, but turning aſide ſeveral ways: For ſometimes ſevere Accidents and Symptoms happen, which require a peculiar, and as it were, extraordinary Phyſical help, to which we muſt Immediately attend, and often interrupting the general Cure. Concerning theſe we muſt obſerve, that as affects which happen upon the Scurvy, require Appropriated Remedies, according to the Nature of each of them, and to the diſpoſition of the Patient, yet Antiſcorbuticks ought always to be mixt with them: It will not be needful to order a Method of Cure againſt all diſeaſes and affects, with which the Scurvy is wont to be attended, for ſo the whole Practice of Pyhſick would be here tranſcrib'd, but we ſhall have regard only to the Symptoms that are chiefly preſſing, by which either the life of the Patient is endanger'd, or the principal Cure Obſtructed; after what manner, and by what Medicines ſuch are Cur'd, I ſhall now ſhew.

Of Curing a difficult Breathing, and Aſthmatick Fits.

A Difficult Breathing, with a ſtraitneſs of the Breſt and Aſthmatick Fits, ought preſently to be removed by appropriated Remedies, to be preſcrib'd beſides the general Method, for otherwiſe the diſeaſed is ſoon brought in danger of life. Since theſe

ſorts of evils ariſe in Scorbutical perſons for the moſt part, either through the fault of the Blood ſtagnating in the Heart, or by reaſon of the Nerves of the Lungs being hindred in their Function, therefore they are Cur'd either by Cordial, or Anti-convulſive Medicines. Spirit of Harts-horn, of Soot, of Blood, of Mans Scull, alſo the Tincture of Caſtoreum, of Antimony, or of Sulphur, Flowers of Sal Armoniack, Flowers of Benzoin, alſo Elixir Proprietatis are often of excellent uſe in theſe Caſes, which kind of Medicines may be frequently given with a Doſe of ſome Antiſcorbutick Liquors, appropriated alſo againſt the foreſaid affects. For the appeaſing of a ſudden difficulty of Breathing which is meerly Convulſive, if at any time it very ſorely preſſes, I have found no more preſent remedy then our *Tincture of Laudanum with Opium* given to ten or twelve drops in a convenient Liquour: For Sleep Stealing on, the Spirits remit of their diſorders, and in the mean while being refreſh't, they reſume afterwards their accuſtom'd offices after a due manner.

Take Roots of the great Bur Dock, of Butter-Burr, and Chervil of each an Ounce: Leaves of Maiden-hair, and Germander, of each a handful; Seeds of the Great Bur Dock, of Baſtard Saffron of each three Drams, Raiſins two Ounces; being ſlic't and bruis'd, let them Boyl in three pounds of Fountain water till the third part be Conſum'd, add of White-wine four Ounces, ſtrain it into a Flagon, into which put leaves of Scurvy-graſs ſlic't a handful, Roots of Elecampane preſerv'd and ſmall ſlic't half an Ounce, make a cloſe and warm Infuſion for three hours, the Doſe is ſix Ounces twice or thrice a day.

Of Affects of the Stomach which are wont to happen in the Scurvy.

SCorbutical perſons are wont ſometimes to be troubled with a great Oppletion and Pain of the Stomach, alſo with a Nauſeouſneſs and Belching, and ſometimes alſo with a frequent and violent Vomiting; which kind of diſtempers ſometimes ariſe from the Chyle, there degenerated into a Maſs of Corruption, but oftner from the Morbifick Matter brought thither, either by the conveyance of the Blood, or alſo of the Nervous Juice, and either depos'd within the Cavity of the Stomach, or fixt in the Plexus's of the Nerves and in the Membranes: In theſe kinds of Caſes, if a Viſcous, Stinking, or otherwiſe Offenſive Matter, be caſt up by Vomit, and there be a ſuſpicion that the cauſe lyes within the Cavity of the Stomach, it's proper to give *a gentle Vomit of Wine of Squills, or of Salt of Vitriol*; Or let the offending

ing Humours be Purg'd off by Stool, either by *Extract of Rhubarb, or by its infusion, with the addition of Salt or Cream of Tartar*: But if the Matter sticks deeply within the Membranes, or the Plexus's of the Nerves; Diaphoreticks, or things, that moderate the effervescencies of the Salts do better; Let *Elixir Proprietatis, or Flowers of Sal Armoniack, or Spirit of Soot be frequently taken with Raddiso Water Compound, water of Earthworms,* or some other Antiscorbutick Liquour. Mean while, once or twice a day, let Fomentations of *Wormwood, Centory, Flowers of Cammomil, Roots of Gentian,* and other things Boyl'd in White-wine, be applyed to the Region of the Stomach, with Wollen Cloths dip't into it warm and wrung forth: The use of Glysters is proper, and Opiats often give great help.

Of the Belly Ach, and the Scorbutick Collick.

SCarce any affect requires a more speedy Physical help than the Colick and Gripes in the Belly, which frequently happen in the Scurvy: Against these evils Glysters of various kinds, Fomentations, Liniments, and Cataplasms are administred: The use of Opiates is found to be very necessary here: Certainly in this Case that Præscript of *Riverius* chiefly has place, *viz.* that *Purging Pills be given with Landanum mixt with them,* for a plentiful Evacuation by seige, and Sleep being caus'd, the Fit often is taken away. Moreover Powders of Shells, by which the sharp Salts are Imbib'd, or fixt, conduce very much to the removal of the Morbifick cause; for example. *Take Crabs Eyes and Egge Shells of each a Dram and a half, Pearl a Dram, make a Powder, divide it into twelve Doses, whereof let one be taken every sixth hour, with a Scorbutick Water, or with the Decoction of the Roots and Seeds of the great Burr Dock, as it is above describ'd, or also with Posset-Drink, having the Roots and Seeds of the great Bur Dock, and the Leaves of sweet Marjoram and Saxifrage Boyl'd in it, and the Leaves of Scurvy-grass infus'd.* In the Scorbutick Colick, also in the affects of the Stomack even now describ'd, the use of *Purging Spaw Waters,* such as we have at *Epsom and Barnet* often proves of an excellent effect.

Of the Diarrhœa or Looſneſs, and Dyſenterical Affects.

AN inveterate Looſneſs, ſuch as frequently happens to Scorbutical Perſons, ought by no means to be ſtopt with aſtringent Medicines, nor is it eaſily cured by altering Medicines, or by Antiſcorbuticks; *Spaw-waters*, impregnated with *Iron*, or *Vitriol*, are the beſt Remedy for this Affect: Next theſe are *Artificial Spaws*, or *Chalybeate Medicines*, which are wont to give a mighty relief: *Crocus Martis*, duely prepared, is juſtly preferr'd before all others. I have often uſed the following Method with good Succeſs: In the firſt place, *Let a Purge be ordered of the Powder or Infuſion of Rhubarb, with the addition of Aromatick Aſtringents, and now and then let it be repeated*, viz. *within the ſpace of three or four days; on the other days let a Doſe of the following Electuary, to the quantity of a Nutmeg, be taken in the Morning, and at four of the Clock. Take Conſerve of Common Wormwood, made with an equal part of Sugar, ſix Ounces; (in a hot Conſtitution, inſtead of this, let Conſerve of Red Roſes be taken) Species Diarrhodon Abbatis, two Drams; white and red Saunders powdered, of each a Dram; the beſt Crocus Martis, half an Ounce; with a ſufficient quantity of Syrup of Steel, make an Electuary.*

In *Dyſenterical Affects*, and the *Teneſmus*, you muſt proceed after the like method, eſpecially let *Spaw-waters* be drank, if it may be; Moreover, let Glyſters, prepar'd of vulnerary Decoctions, be frequently uſed. I lately Cured a certain perſon troubled with a long continued and dangerous Bloody Flux, who had daily voided many Ounces of Blood by Siege for a long time, with this Remedy; *Take of the beſt Rhubarb powdered, an Ounce; red Saunders powdered, two Drams; Cinamon, a Dram; Crocus Martis, three Drams; Lucatellus Balſom, what ſuffices; make a Maſs for Pills.* He took four Pills ſometimes every day, ſometimes every other day, for a Fortnight, and was perfectly cured. To this perſon alſo I preſcrib'd a Phyſick Beer of the *Infuſion of the Roots of ſharp pointed Dock, and the Leaves of Brooklimes, to be conſtantly taken.*

Of

Of Giddines, and Swooning, and other Affects uſually joyned with it in the Scorbutick Affect.

A Giddineſs often happens upon an inveterate Scurvy, to which alſo a frequent Swooning, and almoſt a continual danger of it, and likewiſe a numneſs in the Members, and a ſenſe of Formication, running ſometimes in one place, and ſometimes in another, are wont to be joyned; which kind of Affects proceed from the failings of the Animal Spirits in their Origine it ſelf, and ſometimes from the failings of the ſame within the Nerves, both belonging to the Heart, and to the Members that ſerve for motion: and in regard they depend on the Brain and the *Genus Nervoſum*, their being very much over-charged with a Scorbutick Salt, they are not eaſily cured. Cephalick Remedies, ſuch as are proper in a Giddineſs and Paralytick Affects raiſed by themſelves, ought to be given with Antiſcorbuticks mixt with them: therefore in the firſt place, a Proviſion being made for the whole, by fit Catharticks, and ſuch as are proper in the Scurvy, you may proceed after this manner with appropriated Remedies againſt the foreſaid Affects.

About the beginning of the Cure, *let Blood be drawn from the Veſſels of the Fundament by Leeches*; and unleſs ſomewhat indicates the contrary, let it be frequently repeated afterward.

Take Powder of the Root of Male-Peony, half an Ounce, red Coral prepar'd, two Drams; mans Scull, Elks-hoof, of each a Dram: Take double refined Sugar, diſſolved in Peony-water Compound, or in the Water of Horſe-raddiſh, and boyled to a Conſiſtency for Tablets, eight Ounces; Oyl of Amber excellently rectified, half a Dram: Make Tablets according to Art. Take to a Dram and a half, or two Drams, Morning and Evening, drinking after it a Draught of the following diſtill'd Water.

Take Leaves of Scurvy-graſs, Brooklimes, Water-creſſes, Lillies of the Valley, Sage, Roſemary, Betony, of each three handfulls; green Wallnuts, a Pound; the Rinds of ſix Oranges and four Lemons; freſh Roots of Male-Peony, a Pound and a half; being ſliced and bruiſed, pour to them of the Phlegm of Vitriol, a Pound; Whey made with Cyder, five Pounds; let them be diſtill'd after the common way; let the whole Liquour be mixt together. The Doſe is from three Ounces to four.

Of

Of Hæmorrhagies.

HÆmorrhagies often threaten a mighty danger in the Scorbutick Affect, the Diſeaſed being thereby thrown headlong as it were into the Jaws of Death, whil'ſt the Blood breaks forth almoſt to a Swooning, ſometimes from the Noſtrils, ſometimes by the Menſes, or Hæmorrhoids: Moreover, being ſometimes caſt up from the Lungs or Stomach, it gives us a Suſpicion of an Ulcer, or at leaſtwiſe of a great weakneſs lying hid in the part affected. Wherefore excretions of Blood, if they are either immoderate, or happen in an improper place, ought to be ſtopt for the preſent, and prevented for the future.

For ſtopping Blood when it breaks forth immoderately, the method is vulgarly enough known, and there remains nothing more, or peculiar to be done, when happening in this Affect by reaſon of the Scurvy, than on other Occaſions. But yet to prevent Hæmorrhagies, let Remedies be adminiſtred which take away the Acrimony of the Blood, and conſtringe the over-lax and gaping Mouths of the Veſſels: both intents are excellently perform'd by *Chalybeate Medicines*: the uſe of *Vitriolick Spaw-waters* is very proper for this purpoſe: Moreover, *Infuſions, Extracts, Salts, and the like Preparations of Steel, which contain chiefly the ſaline or vitriolick part of the Iron, are always very profitable againſt Hæmorrhagies.* We have ſhewn before by what means Iron and its preparations produce theſe effects, and divers others, in Human Bodies.

Take Conſerves of Red Roſes, and of the Wild Roſe of each three Ounces, Species Diarrhodon Abbatis, and Diatrion Santalon of each a Dram and a half, Salt of Steel a Dram, Crocus Martis excellently prepar'd two Drams, Red Coral prepar'd a Dram and a half, with a ſufficient quantity of Syrupe of Steel, make an Electuary, let the quantity of a Nutmeg be taken thrice a day, drinking after it a draught of an Appropriated Liquor.

To poor people I uſe to preſcribe thus; *Take tops of Cypreſs and of ſtinging Nettles, of each four Ounces; Brooklimes, two Ounces; let them be bruiſed in a Mortar, with ten Ounces of double refined Sugar; then add Scales of Iron very finely powdered, an Ounce; Powder of white and red Saunders, of each two Drams; with a ſufficient quantity of the Syrup of the Juice of Nettles, make an Electuary: The Doſe is the quantity of a Wallnut twice a day.*

Take of Diſtill'd Water, or of a temperate Antiſcorbutick Decoction, two Pounds; our Steel prepar'd, two Drams; mix them in a Glaſs: The Doſe is three or four Ounces.

Take

Take tops of ſtinging Nettles, Leaves of Brooklimes, of each Four Handfuls; being bruiſed, let the Juice be preſt forth; keep it in a Glaſs. The Doſe is two or three Ounces twice a day, with an Antiſcorbutick diſtill'd Water.

Of the Diſtempers of the Mouth, happening by reaſon of the Scurvy.

ASſoon as the Scorbutick Taint ſeizes the parts of the Mouth, that the Gums ſwell, and their fleſh becomes Spongy, preſently let Remedies be carefully adminiſtred, which may keep them from Putrefaction: Amongſt theſe, waſhings of the Mouth, and Liniments are of chiefeſt uſe, both when the Diſeaſe is beginning about thoſe parts, and when it is come to a greater height there; though as they regard various intents, ſo they ought to be diverſly prepar'd, *viz.* the fleſh of the Gums, when firſt it ſwells, ought to be freed from the incurſions of the Blood, or of the ſalt and corrupted Serum, and to be dried: afterward, the fleſh of the ſame grown flaccid, and faln from the Teeth, ought to be freed from Putrefaction, and alſo to be conſtring'd, that it might hold the Teeth the faſter. For theſe and haply other intents, let Gargariſms, or Waſhings of the Mouth be ordered, of divers kinds; of all which, in a manner the chief ingredients are Vegetables boiled, and Minerals infuſed: The Herbs or Roots, which are boiled in a fit Liquor, *viz.* in Water or Wine, for the moſt part are ſmart or bitter, or ſtiptick; and then thoſe Decoctions are impregnated either with a volatile, lixivial, vitriolate, Chalybeate, or aluminous Salt. I ſhall here ſet down certain forms of each kind.

1. When therefore the fleſh of the Gums firſt ſwells, and becomes ſpongy by reaſon of the Influx of the ſalt and corrupted Blood and Serum, *Take the middle Bark of Elder, and of Elm, of each half a Handful; Leaves of Savory, Sage, wild Muſtard, Garden-creſſes, of each a Handful; Roots of Pelitory of* Spain, *two Drams; being ſliced and bruiſed, let them boyl in three Pounds of Water of Lime, till a third part be conſumed; if ſweetning be required, add Honey of Roſes, two Ounces; make a Gargariſm. Or, take Vitriol Camphorated, an Ounce; (vulgarly with us it's called by the name of Captain* Green's *Powder) Fountain-water, two Pounds; mix them in a Glaſs; ſhake it and then when the Liquor is grown clear by ſetling, let it be uſed. Or, prepare a Lixivium of the Aſhes of Broom, or of Roſemary, or of Tartar and Nitre Calcin'd: In three Pounds*

Pounds of this, boyl Leaves of Savory, Time, Sage, and Roſemary, of each a Handful; let the ſtraining be poured on two Handfuls of Scurvy-graſs; make a warm and cloſe Infuſion for three hours: Let it be ſtrained again, and kept for Waſhing the Mouth ſeveral times in a day.

For the ſame Intent, let Liniments alſo be applied betwixt whiles, and eſpecially in the Night, that their Virtue may be conveyed to the Diſeaſed even when they are aſleep. Amongſt Authors, a common, famous, and long tryed Medicine is found: *Take the Powder of the Leaves of Columbines, the Curl'd Mint, Sage, Nutmegs, Myrrh, (which laſt nevertheleſs may be ſometimes omitted) of each two Drams; Burnt Allom, half an Ounce; Virgin-Honey, four Ounces, or what ſuffices; make a Liniment according to Art.*

2. If at any time the Fleſh of the Gums growing Flaccid falls from the Roots of the Teeth, let a Gentle Scarrification be often us'd, and alſo let the mouth be waſh't with this Decoction. *Take tops of Brambles and Cypreſs, Leaves of Sanicle, and Cuckow Flowers, of each a handful, Boyl them in three pounds of Water, in which Iron has been quencht till a third part be conſum'd, to the ſtraining ad Hony of Roſes two Ounces mix them.*

Let a Liniment of this kind be applyed. *Take Powder of the Roots of Florentine Orris, Leaves of Sage and St. Johns Wort of each two Drams. Bole Armeniack, Sal Prunella of each a Dram, warm Virgin Honey what ſuffices, let them be incorporated by ſtirring them.*

3. When the Gums Putrifie, and are Corrupted, and withal the Teeth being Rotten grow looſe, and emit a Stinking Smell, let ſtronger Medicines, and ſuch as greatly reſiſt putrefaction, be uſed, *an infuſion of Vitriol Camphorated, alſo of the Lapis Medicamentoſus, have chiefly place here.*

Or, *Take Roots of Gentian, and of Round Birth-wort ſlic't, of each half an Ounce, Leaves of the Leſſer Centory, Pontick Wormwood, Savory, Columbines of each a handful, let them boyl in three pounds of Lime Water, or of a Lixivial Water, alſo* ſometimes in Water in which Iron has been quencht, ſometimes in Alum Water till a third part be conſum'd; to the ſtraining add Crude Hony two or three Ounces; mix them.

4. If the falling out of the Teeth be chiefly fear'd. *Take Barks of the Roots of the Sloe Tree an Ounce, Tormentil and whole Biſtort of each a handful, Pomgranate Rinds and Balauſtia of each half an Ounce; Boyl them in three pounds of Fountain Water; to the Straining add Alum two or three Drams, of the beſt Hony two Ounces, mix them. Take Vitriol Complorated, Burnt Harts-horn*

of

of each a Dram, Nutmegs half a Dram, of the beſt Hony what ſuffices; make a Liniment. Or, *Take Powder of the Roots of Biſtort, Pomgranate-rinds, Bole Armoniack, Burnt Allum of each a Dram, Hony of Roſes what ſuffices, add Spirit of Vitriol a Scruple, make a Liniment.*

5. If at any time putrid and profoun'd Ulcers (as it ſometimes happens) infeſts the Gums, or other parts of the Mouth, let the forementioned ſtronger Medicines be often adminiſtred: *Moreover let a Cloth dipt in Unguentum Egyptiacum, diſſolv'd in Spirit of Wine, or in an infuſion of the Lapis Medicamentoſus, or of Sublimate, be now and then applyed to the place affected.* In theſe Caſes let the Cure be committed to to a skilful Chirurgeon.

Of Pains that are wont to trouble the Legs, and ſometimes the other Limbs, and that chiefly by Night.

AGainſt theſe Pains, in regard that ſometimes they are very vehement, beſides the general method of Curing the Scurvy, ſpecial Remedies, and ſuch as obviate that ſymptom are Indicated; therefore in ſuch a caſe, a courſe of purging being well ordered, alſo the Perſon being Blooded (if need be) we ought to ſet upon the Diſeaſe both with inward Phyſick, and outward Topicks.

As to the former, ſuch things as promote Sweat, and alſo an evacuation by Urine often give help, in as much as they draw another way the lixivial and ſharpiſh Recrements of the Blood and nervous Juice, that are wont to be gather'd together in the Part affected; but eſpecially let thoſe things be given which free both Humours from their evil Diſpoſition, *viz.* both ſaline and ſharpiſh: *Powders of Shells, Crabs Eyes, the Jaw-bone of a Pike, alſo the Spirit and Flowers of Sal Armoniack, Spirit of Blood, Tincture of Antimony, of Coral; Decoctions of the Roots and Seeds of the great Burdock, Ground-pine, and Germander do excellently well; and let thoſe kinds of Remedies be taken twice or thrice a day with Antiſcorbutick diſtill'd Waters. A Water diſtill'd from Horſe-dung with the addition of Scurvy-graſs, Brook-limes, Ground-pine, and the like, is ſometimes very profitable; mean while let Fomentations, Liniments, Catap'aſms, or applications of other kinds, which appeaſe Pains, be outwardly Adminiſtred.*

Of the Scorbutick Gout moving from one place to another.

OF this Affect *Eugalenus*, *Wierus*, *Medicus Campenſis*, and *Georgius Horſtius* have written peculiar Tracts: It is ſaid to be very Common in the Northern Parts of *Belgia*; a certain token of which appears by putting a live Earth-worm to the place affected, for its preſently wont to ſpring, bend and knit it ſelf, and to faint and dye; which indeed I have found pretty often to happen in this Diſeaſe even amongſt us; which effect ſeems to proceed from the very ſharp, and as it were Corroſive Effluvia, that plentifully flow from the place Pain'd and Swoll'n: By Reaſon of the effect of that Experiment, the Cure of the Diſeaſe is wont to be undertaken by Worms, *viz.* by Remedies prepar'd of them; though I know not whether being inwardly taken they will as certainly deſtroy the Diſeaſe, as being outwardly applied they are diſpatcht by it. However, *Earth-worms*, as alſo *Snailes*, *Millepedes*, *and other exanguious little Animals, in as much as they abound with a volatile Salt, often prove a pretty efficacious Remedy.*

Henricus Petræus tells us of two Remedies very much us'd in *Weſtphalia* againſt this Diſeaſe. *Take nine Earth-worms, bruis'd with two Spoonfuls of Wine in a Mortar, and ſtrain'd through a Cloth; to theſe let half a Meaſure of Wine be added, let three Spoonfuls be taken at Morning, Noon, and Night for many days.* 2. *Take two or three Branches of Savine, Virgin Hony two ſpoonfuls, boyl them with a Meaſure of Wine, till it pitches two Fingers: Let the ſtraining be taken to four or five ſpoonfuls thrice a day.* To the former Medicine a certain vulger potion, mentioned by *Horſtius*, called, *Monaſterienſis* is allied: *Take Sage, Betony, Rue, of each five Leaves, Earthworms with Circles about their Necks, in number five, a little Savine, and Roots of Devils-bit in number two, let them be bruis'd with Water of Elder Flowers, and let the expreſt Juice be given for raiſing a Sweat*; A like preſcript alſo is propos'd in *Foreſtus à Medico Campenſi.*

Certainly in this affect, the Magiſtral Water of Earth-worms preſcrib'd in the *London* Diſpenſatory is of excellent uſe. And I have often given with good ſucceſs the *Spirit and Salt of Hartshorn, Spirit of Blood, and Flowers of Sal Armoniack. Moreover teſtaceous Powders*, viz. *Crabs Eyes, Coral, Pearl, and Vegetables which are accounted Antidotes againſt the Gout, as Roots of round Birth-wort, Leaves of Ground-pine, Germander, and the like, being*

joyn'd

joyn'd with Antiſcorbuticks conduce to the Cure of this Diſeaſe; outwardly for appeaſing Pains, beſides Anodynes which are uſ'd under the form of a Liniment, Fomentation, or Cataplaſm: Oyl of Earthworms, of Frogs, and Toads are often very availing. I have been told by a worthy Perſon who was very obnoxious to this Diſeaſe, that *Water drawn by Deſtillation from the Contents taken out of the Stomach of a Beef newly kill'd, and Cloaths being dipp'd into it when Warm, and applied as a Fomentation, would moſt certainly give eaſe.*

Of Convulſive and Paralytick Affects, that are wont to enſue upon the Scurvy.

IF at any time the Scorbutick taint paſſing into the Brain, and *Genus Nervoſum*, greatly corrupts the Liquor reſiding in each Province; thereupon divers kind of Affects, and eſpecially Paralytical or Convulſive are wont to ariſe; *viz.* according as the Morbifick Matter brought in to the Animal Æconomy is either Narcotick or Exploſive: Which kind of Affects, though in this caſe they are Symptomatical, yet when they are grown to a hight, they challenge both the name, and the better part of the Cure before the Scurvy their parent; ſo that the diſeaſed are ſaid to be troubled with the Palſy, or Convulſions, rather than with the Scurvy, alſo Medicines deſign'd againſt thoſe Affects, have the preference to any others at the ſame time required by reaſon of other intents.

For Curing theſe kinds of Affects hapning upon the Scurvy, let this chiefly be obſerv'd, that Remedies appropriated to thoſe ſame be duly Complicated with Antiſcorbuticks. As to Convulſive Diſeaſes, the Remedies that are in the foregoing Tract may eaſily be Transfer'd hither: And as to the Palſey, Lethargy, and many other Affects of the Brain, and *Genus Nervoſum*, we ſhall diſcourſe of them particulary in ſome other Tract.

Of the Atrophia, alſo of the Scorbutick Fever which is often the Cauſe of the other, or its Effect.

THere are three kinds of Cauſes, having ſome orderly dependance on each other, from one or more of which a Scorbutical *Atrophia* is wont to be produc'd without a Conſumption

of the Lungs, *viz.* either the Chyle is perverted through the fault of the first passages, so that a laudable or sufficient Store of it is not convey'd to the Blood. Secondly, or being brought into it yet through the fault of the Blood it is not duly chang'd into Blood and a nutritive Juice. Thirdly and lastly, the nutritive Juice prepar'd in the Mass of Blood, is not duly assimilated to the solid parts, through the fault of the nervous Liquor.

The Remedies appropriated to this Symptom regard either the amendment of the first Passages, or the correction of the foresaid Humours. As to the former, it sometimes happens by reason of the Tone of the Stomach being broken, or its Ferment being vitiated, that the Food taken into it is not duly concocted, but passes into an unprofitable Mass of Corruption. For these sorts of evils let gentle Cathartick, Digestives and Corroboratives be us'd: But the work of Chylification is oftner hindred by reason of a Schirrous Tumour rais'd sometimes in the Ventricle, sometimes in the Mesentery, or in other adjacent parts: In this case Deobstruents and Dissolvents are proper, the use of *Spaw-waters* has the preferance to any other kinds of Medicines: Moreover, Fomentations, Liniments, or Plaisters ought to be outwardly applyed.

Again, it sometimes happens that without any Tumour rais'd in the *Viscera*, the Lacteal Vessels are so much obstructed by a gross and viscous matter sticking in them, that a sufficient store of the Chyle, though it be laudable enough and plentifully prepar'd, is not convey'd into the Blood. In this affect the Belly for the most part discharges Excrements plentifully, but they are White like coagulated Milk, and not as other Excrements ting'd with Choler or Stinking: The reason of which is, that the Blood being depauperated, more sparingly engenders Choler, from the effusion of which into the Intestines the Colour and Stink of the Excrements proceed: In this case *Spaw-waters* are chiefly proper; also Deobstruents being inwardly given, let Liniments, Fomentations and Baths be outwardly us'd.

Against the *Marasmus*, caus'd through the fault of the Blood degenerated from its Crasis, Asses or Cows Milk, diluted with Barley Water, or a proper distill'd Water often give help. Snail Broaths, or Milk Drinks with Snals boyl'd in them; moreover Waters distill'd of Milk, or Whey with Snails and temperate Antiscorbutick Herbs, are greatly conducing in this case: For this end also Decoctions of vulnerary Herbs, and Antiscorbutick Herbs infus'd in them, are taken with good success: Mean while let frictious be daily us'd to the outward parts with Cloaths moistned and made Warm with *Unguenticum Resumptivum*, or fresh Oyl of Almonds.

When an *Atrophia* ariſes through the fault of the Blood, being affected, and conſequently perverting the nutritive Juice, it has for the moſt part a Feaver of irregular returns joyned with it, with Night-ſweats, *viz.* in as much as the Maſs of Blood is forc't to irregular and inconſtant Effervescencies from that degenerated Juice, and the matter ſo offending is caſt forth by Night-ſweats; in this caſe, a thin Dyet being ordered, let Decoctions and Diſtill'd Waters, that fuſe and purifie the Blood, be frequently taken, with Antiſcorbuticks mixt with them.

Take ſhavings of Ivory and Harts-horn, of each two Drams and a half; candied Eringo Roots, ſix Drams; Roots of Cheroil and Dandelion, of each half an Ounce; Leaves of Harts tongue and Liverwort, of each a handful; one Apple ſlic't; Raiſins, a handful; Let them boil in four Pounds of Fountain-water till a third part be conſumed; let the ſtraining be poured on Leaves of Brooklimes bruiſed, two handfuls; Sal Prunella, a Dram and half, or fixt Nitre, a Dram; make a cloſe and warm Infuſion for three Hours: Let four or ſix Ounces be taken thrice a Day.

Take Leaves of Brooklimes, four Pounds; Roots and Leaves of Sorrel and Dandelion, of each two Handfuls; Snails cleanſed, a Pound and a half; the Rinds of two Oranges; being ſliced and bruiſed, pour to them of new Milk, or of Whey made with Cider or freſh Juice of Apples, ſix pounds; let them be Diſtill'd after the vulgar way: Let three Ounces be taken twice or thrice a day.

Of the Rheumatiſm.

WE conclude that this Affect proceeds from the congreſs and mutual effervescency of Salts that are of a different Origine and Nature, *viz.* of the fixt Salt coming from the Blood, and of the acid Salt coming from the nervous Liquor: The Subjects of both Salts are ſuperfluous Dregs, depos'd from the foreſaid Humours forc'd into certain Turgeſcencies, and diſcharg'd ſometimes on theſe Parts, ſometimes on thoſe: Wherefore that the Diſeaſe may be Cur'd, both let the Turgeſcencies of the Humours be appeas'd, and their ſuperfluous Dregs be purg'd forth, and let the Salts degenerating both ways be reduc'd to a State of volatility.

For the two firſt intents a gentle Purge and Bleeding are chiefly requir'd, and now and then, as the ſtrength will bear, they ought to be repeated; and alſo let Diureticks and Diaphoreticks be now and then given which any way convey forth the Saline Seroſities. And that theſe Evacuations proceeding calmly, and with

with a well-bearing, and Nature aſſiſting, may ſucceed the better, let Opiats frequently be us'd. For the other Intent in which the chief ſtreſs of the Cure conſiſts, Alteratives, and eſpecially ſuch as are endow'd with a volatile Salt, greatly conduce: Wherefore in this caſe its a vulgar, but no contemptible Medicine, to *give twice or thrice a day to four or ſix Ounces of the Infuſion of a Stone-horſe Dung, made in a ſmall Wine or Ale, or in an appropriate Diſtill'd Water:* and a Medicine ſomewhat more grateful, and no leſs efficacious, may be prepar'd, if *a Water be diſtill'd from that Dung, with Antiſcorbutick Ingredients infuſed in White-wine or Cider, which may be given to three or four Ounces twice a day.* I have often preſcribed *Spirit of Harts-horn, and of Blood, in this caſe, with a mighty benefit to the Diſeaſed.*

Of the Dropſie.

WHereas we conclude the Dropſie, which is wont to happen upon the Scurvy, to be twofold, *viz.* habitual and occaſional; Concerning the Cure of the firſt, for the moſt part all labour is loſt; for no Remedies are able to reſtore the Liver and the Lungs, and ſometimes other Viſcera, wholly vitiated, and the Craſis of the Blood utterly ſubverted: In ſuch a caſe, if any thing ſeems fit to be done, the Scope of Phyſick is very narrow; for there is no room left for Catharticks, nor Diaphoreticks, nor for a ſtrong Evacuation of any other kind: We muſt inſiſt chiefly, and in a manner only, on Diureticks and Cordials. For theſe ends let Elixirs, Tinctures, Electuaries, Powders, Infuſions, Decoctions, diſtill'd Waters, *&c.* which conſiſt partly of Antihydropicks, partly of Antiſcorbuticks be given; the forms of which I have nevertheleſs thought good to omit, as ſignifying little or nothing.

The Scorbutick Dropſie, raiſed on a ſudden from an evident cauſe, or on ſome accident, often admits of Cure; for the more eaſie performance of which, the tumults of Nature ought in the firſt place to be appeaſed, and its diſorders compoſed. Wherefore if Watchings continue very offenſive, let ſleep be procured by the uſe of Opiats, and now and then, as often as it ſeems very neceſſary, let it be procured again. As ſoon as ſtrength will give leave for Purging, let the following Powder be taken, and let it be now and then repeated at due intervals of time: mean while let the Belly be kept ſoluble by the frequent uſe of Clyſters.

Take

Take Mercurius Dulcis, a Scruple; Resin of Julape, from five Grains to ten; Cloves, half a Scruple; mix them; let it be given in a Spoonful of Panada; at other times let Diuretick, and sometimes Diaphoretick be carefully taken.

Take Tincture of Salt of Tartar, impregnated with the Infusion of Millepedes, as much as you think good; let it be given from a Scruple to two Scruples twice a day, with an appropriated Liquor.

Take Spirit of Sal Armoniack, what you think good; the Dose is from half a Scruple to fifteen drops, after the same manner.

Take Millepedes prepar'd, three Drams; Salt of Tartar, two Drams; Nutmegs, a Dram; mix them; make a Powder. The Dose is half a Dram twice a day, with an appropriated Liquour.

Or, Take Bees dryed and powdered, two Drams, Seeds of Bishopsweed powdered, a Dram; Oyle of Juniper, a Scruple; Turpentine, what suffices; make a Mass of Pills. The Dose is from a Scruple to half a Dram twice a day, drinking after it an appropriated Liquor.

Take Leaves of both Scurvy-grasses, Watercresses, Dittander, Arsmart, of each three handfuls; Roots of Aron, Briony, Florentine Orrice, of each four Ounces; the middle Bark of Elder, two Handfuls; Winters-bark, two Ounces; the outward Coats of four Oranges, and of three Lemons; fresh Juniper-berries, four Ounces; being slic't and bruised, pour to them of Rhenish-wine three Pounds; Wine of the Juice of Elder-berries, two Pounds; Distill them the vulgar way; let all the Water be mix't. The Dose is from three Ounces to four twice a day, after a Dose of some one of the Medicines above prescrib'd.

Let Decoctions and Physick-Beers be prepar'd, such as above written, Antihydropick Ingredients being added to them.

Of the Crackling of the Bones.

THere remains yet a symptom which happens sometimes upon the Scurvey, though rarely, *viz.* the crackling of the Bones, into the Nature and Cure of which it seems to concern us to enquire. I have known some, though scarce above three or four, who being long Sick of the Scurvy, found themselves afflicted by it, not only in the Humours, and the Carneous Parts, but at length in the very Bones: For as often as they mov'd any Member any way, the ends of the Bones, as though they were bare, rubbing against each other, made a mighty noise: Moreover, when they lay in their Bed, and there turned themselves from one side to the other, a mighty Crackling was heard, as it were of a Scelleton forcibly shaken, terrifying even the persons affected.

The

The conjunct cauſe of this haply may ſeem to be, That the ſoft Interſtice of the Bones, *viz.* the Fat, Membranes, and Ligaments being greatly conſumed, their Joints, as Mill-ſtones when bare without any Corn, by reaſon of their mutual rubbing againſt each other, make a noiſe: But the thing appears to be otherwiſe, becauſe neither perſons mightily conſumed have this Crackling of the Bones, nor do perſons troubled with this Affect always waſte away; wherefore, we ſay rather that the immediate Cauſe of this Symptom is the drineſs of the Bones, or the defect of the Marrow properly ſo called, which ought to be contain'd within the Cavities of the Bones, and eſpecially within their Joynts; for ſince all Bones include a Marrow or unctuous Humour, either in the great Cavities, or in the Pores and ſmall Paſſages every where made in them, we conclude the uſe of this to be both, that the Bones irrigated with the ſame, may become leſs brittle, and likewiſe that that Humour, diſtilling from the Joynts of the Bones, may make ſlippery all the Joints, as the Joynts of a Machine beſmear'd with Greaſe, and may ſo facilitate the motions of them; wherefore the ends of the Bones, deſtitute of this Marrow, make a noiſe juſt as the Wheels of a Cart ſeldom greaſed.

If you ask why that unctuous ſubſtance of the Joints fails; I ſay this ſeems chiefly to happen becauſe the Pores and Paſſages of the Bones are ſo much obſtructed by a certain extraneous Matter, haply of a Slimy or Tartarous Nature, brought to them from the Blood, that they do not ſufficiently receive the Balſam deſign'd for them, nor diſtil it forth for moiſtning their Joints; but it will not be eaſie (the thing being wholly in the dark) to ſearch out the particular Reaſons of this Affect.

Nor are we leſs at a loſs when we proceed to the Cure of this Diſeaſe; for though the Primary Indication, *viz.* the moiſtning of the Bones or of the Joints be obvious enough, yet it does not ſo plainly appear after what Manner, and by what Remedies it is perform'd. For in this caſe I have known a great many kinds of Medicines, and various ways of Adminiſtrations tryed wholly in vain. A certain Ingenious Man, extreamly troubled with this Diſeaſe for many years, tryed the Advice of many, and thoſe Famous Phyſicians; Beſides the uſual Remedies againſt the Scurvy (together with frequent Bleedings and Purgings, from which he found not the leaſt Relief) he try'd moreover various and great Courſes of Phyſick, without any ſucceſs: For after a method us'd by one Phyſician for ſome Months without Effect, he preſently betook himſelf to another, and ſo afterwards to many; mean while, by each always a new way of Curing, untryed by the former, is preſcribed; Fomentations, Liniments, and Frictions

ctions are applied daily to each of his Joints; he us'd for some time the hot Baths of *Bathe*; afterward *Spaw-waters* of various kinds, sometimes these, sometimes others are drank: Which giving no help, a Chalybeat course, at another time a Decoction of temperate Woods, sometimes a Milk Diet; and at all time Electuaries, distil'd Waters, Apozems, and other Remedies prepar'd of Antiscorbuticks are taken: And when he had liv'd after this manner, above three years almost constantly, *Medicè & misere*; there was not made the least progress towards the Cure of the fore-mentioned Affect; yet in the mean time he was pretty well as to his Strength and Stomach, married a Wife, and as to the other more common Symptoms of the Scurvy he was better. So that it hence appears, how stubborn a Disease, and unconquerable by almost any Medicines, the crackling of the Bones is; which I have known confirmed also in others troubled with this Affect, and wholly eluding the endeavours of a Physician.

CHAP. V.

Of the Vital Indication, in which are included Cordial Medicines, Opiats, and the Diet requisit in the Scurvy.

HItherto we have set forth at large the Indications both Preservatory and Curatory, which belong to the Method of Curing the Scurvy; there remains yet to speak of the Vital Indication, to wit, that it may be declar'd by what Method, and with what Remedies the powers of the Diseas'd, which either being too apt to faint, may be upheld, or being weakn'd or dejected may be restor'd: For these ends Cordials and Opiats, according to the Exigencies of the Diseas'd, are prescrib'd to be taken, and moreover let a right Form of Diet, if at any time it

be needful, Resumptive, and always Antiscorbutick be prescrib'd.

As to Cordial Medicines, *viz.* such as exagitate the Blood stagnating in the Heart, renew its flame half extinct, restore the oppress, or distracted Animal Spirits to their liberty and due irradiation, it is obvious that many Remedies, which are properly call'd Antiscorbuticks, perform these intents, of which kind are, *Raddish-water compound, the Magistral Water of Snails and of Earth-worms, Spirit of Harts-horn, of Soot, Powders of Shells,* with many other things, which may be taken with good effect, not only at certain hours, and according to a set Method, but likewise as occasion presents, as often as a Swooning, or any failings of the Spirits happen.

But besides, those who are found to be very obnoxious to Passions of the Heart, frequent Faintings, a Nauseousness, Vomiting, Trembling, Vertigo and other terrible Symptoms, may also have in a readiness, Medicines of another kind, more properly Cordial, with which, all failings of the Spirits are immediately reliev'd: In this case, *Quercetan's great Elixir of Life,* does excellently well; the second Water in the distillation of the same *Elixir being sweetned, may be given to a spoonful; also Aqua Mirabilis, Aqua Bezoartica,* Gilberts *temperate Water, Treacle-water, Cinnamon-water; to each of which, or to a Composition of them, let the Confection of Alkermes, the Confection of Hyacinth, Powder of Pearl, or Magistery of Coral, Syrup of Clove-gilliflowers or of Coral, of Citron-pills, of Cinnamon be added:* Of these, and others of this kind various forms of Medicines are wont to be prescrib'd. For example;

Take Treacle-water, and Aqua Mirabilis, of each three Ounces, Bawm-water four Ounces; Syrup of Clove-gilliflowers an Ounce and a half; Confection of Alkermes a Dram; mix them. The Dose is three or four Spoonfuls.

Or, Take Aqua Mirabilis six Ounces; Water of Snails and of Wallnuts, of each two Ounces, Pearl powdred a Scruple; Confection of Hyacinth a Dram; Syrup of Clove-gilliflowers an Ounce; mix them.

When Scorbutick Women are wont to be troubled with Hysterick Fits, and Men with Convulsions *Take Water of Bawm and Pennyroyal, of each three Ounces; compound Briony-water four Ounces, Tincture of Castoreum half an Ounce; Tincture of Saffron a Dram; Syrup of Clove-gilliflowers a Dram and a half; Castoreum tyed in a Nodulus, and hung in the Glass a Dram.. The Dose is three or four Spoonfuls.*

For those who desire rather to have Cordial Medicines in a solid form; let Electuaries or Tablets be prescrib'd.

Take

Take Conſerve of Clove-gilliflowers three Ounces; Confection of Alkermes half an Ounce; Pearl powdred a Dram, with a ſufficient quantity of Syrup of Coral; make an Electuary.

Take Species Diamargaritæ Frigidi, and Diarrhodon Abbatis, of each a Dram and a half; Pearl powdred a Dram; double refin'd Sugar diſſolv'd in Treacle-water, and boil'd to a conſiſtency for Tablets four Ounces; Oyl of Cinnamon ſix drops; make Tablets according to Art.

As to *Opiats* and *Anodine Medicines*, in ſome certain affects of Scorbutick perſons, I had rather be without any kind of Medicine beſides, than the uſe of them. For not only againſt obſtinate Pains and Watchings, but in Aſthmatick Fits, in Vomitings, a Diarrhæa, and alſo in a Vertigo and Convulſive Paſſions, as often as nature being irritated above meaſure, falls into extream irregularities, I have found no Remedy more excellent, than to procure ſleep by giving a ſafe Narcotick: Mean while there is need of a very great caution, that they be not taken, if at any time ſomething in the Conſtitution of the Diſeas'd, or in the nature or time of the Diſeaſe, forbids the giving of ſuch a Medicine.

Beſides the Hypnoticks uſual in Apothecaries Shops, *viz. Laudanum Opiatum, Nepenthe*, the *Philonia*, *Diacodium*, and *Syrup of red Poppies*, two other preparations of *Opium* are known to me, which I uſe to give in the form of a Tincture, or of a liquid Extract from ten drops to twelve with ſome other appropriate Liquour.

The Diet, or Form of Living to be obſerv'd in Scorbutical perſons, is of no ſmall importance in the Method of Cure; for that being neglected or ill ordered, the other Preſcripts of Phyſick do little or nothing towards Health: The Rule of Diet being extended to various things, is chiefly concerning the Air and Situation of the Habitation, Meat and Drink, and the motion or reſt of the Body.

As to the firſt, what kind of habitations and places of Reſidence, in reſpect of the Heavens and the Earth, cauſe the Scurvy, and conſequently ought to be ſhun'd, it is ſufficiently manifeſted by what we have ſaid before: Thoſe that endeavour to prevent or cure this Diſeaſe, ought to take care to chooſe an Air moderately hot and dry, and which alſo is ſubtle and pure, and ſufficiently expos'd to the Winds.

Such Food only is proper which has a good Juice, and is eaſie of Concoction, let ſuch as is groſs, viſcous, and dryed in the Smoak, mouldy and rank, alſo ſuch as is unfermented or greatly compounded, all manner of Pulſe, Milk-meats and unripe Fruits

be ſhun'd. I ſo much diſapprove things preſerv'd, or very much ſeaſon'd with Sugar, that I judge the invention of it, and its immoderate uſe to have very much contributed to the vaſt increaſe of the Scurvy in this late Age: For that Concret conſiſts of a very ſharp and corroſive Salt, though mitigated with a Sulphur, as it plainly appears from its Chymical Analyſis: For Sugar diſtil'd by it ſelf, yields a Liquour ſcarce inferior to *Aqua Stygia*: And if you diſtil it in a Vefica with a great deal of Fountain-water, pour'd to it, though the fixt Salt will not ſo aſcend, nevertheleſs a Liquour will come from it, like the Hotteſt *Aqua Vitæ*, burning and very pungent; when therefore Sugar mixt almoſt with any ſorts of Food, is taken by us in ſo great a plenty, how probable is it that the Blood and Humours are rendred ſalt and ſharp, and conſequently Scorbutical by its daily uſe? A certain famous Author has laid the cauſe of the Engliſh Conſumption on the immoderate uſe of Sugar, amongſt our Countrymen; I know not whether the cauſe of the ſpreading Scurvy, may not alſo be rather hence deriv'd.

Let the Drink be midling Ale, mild and clear, and alſo let it be altered with Antiſcorbutick Ingredients without an ungrateful ſavour: Let it not be thick and ſweet, nor alſo too old and turning ſharp: Let this be taken in a moderate quantity, and in a manner only at the ſet hours of Dinner and Supper: The cuſtom which has prevail'd with many, *viz.* that aſſoon as they are out of their Beds, they preſently indulge themſelves to drink a large Mornings Draught (as they call it) ſeems very pernicious: For by this means the Blood Veſſels are too much fill'd, a ſtore of new Chyle being almoſt continually ſent into them, and Crudities and Filthy Morbifick Dregs are engendred in the Blood, and the office of Sanguification is greatly debilitated: Truly it is better for moſt Men (unleſs it be thoſe whoſe Ventricle, as long as it is empty, is wont to be painfully contracted and corrugated) to keep themſelves faſting till Dinner time: Nor is that vulgar cuſtom leſs contrary to Health, to ſwill themſelves with much Drink preſently after Meat: Wines and Ciders, ſo they are mellow, pure, and not adulterated, being taken in a moderate quantity, do not offend: But the ſame being counterfeit, muſty, auſtere, or turning ſharp, there is nothing more hurtful or injurious to our Health

Exerciſes and Labour are ſo notably conducing both to the cure and prevention of the Scurvy, that many by this ſole Remedy, either preſerve or recover an entire Health: For the Blood

and

and Nervous Liquour of persons that lead an idle and sedentary Life, (like Stagnating Waters) contract a clammineſs and mouldineſs: But upon the aſſiduous and much motion of the Body, the Humours and Spirits become clear, and get a vigour, the Excrementitious and Heterogeneous Particles evaporate, the ſtuffings of the Bowels are purg'd, and their Tone is corroborated.

CHAP. VI.

Some Stories and rare Caſes of Perſons troubled with the Scurvy.

A Woman of Renown, tall and graceful, about the twenty fifth year of her Age, had contracted a Scorbutick Taint, by reaſon of various errours committed in Diet. The ſigns of which were a Spontaneous Laſſitude, a difficult Breathing, Pains and Spots in the Legs, and her Gums likewiſe ſwoll'n, and full of Blood; in the Spring time after an Abortion, falling into a Tertian Ague, ſhe ſoon became in a languiſhing and weak condition, from which Diſeaſe nevertheleſs, firſt being Methodically proceeded with in Phyſick, ſhe had ſoon recovered, but that indulging her ſelf to eat Fleſh and other improper things, ſhe ſoon had a Relaps; and then being a weary of Phyſick, ſhe took only Empirical Remedies, with which ſometimes the Fits of the Ague were driven away, but often preſently return'd, mean while the Diſeas'd being pale, unable for motion, and wanting Breath, continued ſwol'n and blown up about the Ventricle and Hypochondres. About the third Month of her being ſick, ſhe began to have Gripes and bitter Tortures in her Belly; with which ſhooting ſometimes to the Back, ſometimes to the Stomach ſhe was afflicted almoſt continually day and night: Moreover ſhe was affected with a frequent Vertigo, and ſometimes with Fits as it were, Hyſterical: Alſo being troubled with a frequent Vomiting, ſhe daily threw up a viſcous and froathy Phlegm: Within a Months ſpace this Diſeaſe paſſing to its higheſt

pitch

pitch, rais'd pains in the Back and Loins, and ſo afterward in all the parts of the Body: Beſides, at this time ſhe complain'd of a mighty ſtraitneſs of her Breſt, and a great contraction of the Viſcera: Mean while the habit of the Body fell away to a mighty Leanneſs, ſo that the Bones being deſtitute of Fleſh, ſcarce ſtuck to the Skin; the Urine was little and very ruddy; on the ſurface of which grew a little thin Film garniſh'd with various colours like the Tail of a Peacock: A ſhort while after this, a Numneſs and Formication was perceiv'd ſometimes in the Belly, ſometimes in the Limbs, and afterward the Gripes and Pains began to remit; nevertheleſs in their ſtead, a Palſey ſucceeded, which within a weeks ſpace ſo pervaded all the Members of the whole Body, that ſhe was not able to bend, or any way to ſtir from its place either Hand or Foot, or any other part.

It is obvious that thoſe ſevere Symptoms proceeded from a Scorbutick Root, for by reaſon of the taint principally fixt on the Blood, the Spontaneous Latſſiude, the difficult Breathing, nay, and the intermitting Fever hapning at random, and often returning, and the Bickerings of other Symptoms previous, as it were, and light, were caus'd: Again the Lixivial Urine, and that diverſified colour of it plainly ſhew'd the Blood to be ſeis'd with a Sulphureo-ſaline Diſcraſie; which kind of Urine I have obſerv'd to be ſo mark't in many others, affected with the like Diſeaſe: Moreover when in this ſick Lady, the Morbid *Seminal* Root being increaſt in its ſtore, and flowing into the Maſs of Blood, came to ſpread it ſelf on the Confines of the Brain and *Genus Nervoſum*, the other more violent affects aroſe.

This Lady living far hence, by the advice of a Neighbouring Phyſitian took Medicines uſual againſt the Collick; which doing no good, and the Diſeaſe growing worſe, the Patient being brought to *Oxford*, tryed a great many Remedies both Antiſcorbutick and Antiparalyticks almoſt of every kind and form, though without any benefit: Since therefore any ordinary Method of healing ſeem'd not ſufficient for this Diſeaſe, it was thought good to proceed to great Remedies, and truly ſuch as were not wholly void of danger: Wherefore we gave this ſick perſon, as weak and worn away as ſhe was, a Mercurial Medicine for raiſing a Salivation, which effect enſued according to our deſire, for a Flux ariſing within two days, and gently continuing for many days without any ill Symptom, gave a very great relief to the noble Lady: For the Pains being mitigated,

ſhe

ſhe began in ſome meaſure to move her Limbs, to have a better Stomach, and to digeſt her Food better, and to enjoy a quiet Sleep: The Salivation being over, ſhe took a Decoction of Sarza and China, with Antiparalytick Ingredients for a few days: Afterward being carried to *Bathe*, and having there us'd the temperate hot Baths, for ſome time ſhe recover'd an indifferent ſtate of Health. The whole Winter ſhe conſtantly took Medicines againſt the Scurvy and the Palſey: And upon her renewing the uſe of the hot Baths the year following, ſhe grew perfectly well; and ſince is become the joyful Mother of many Children.

A Man forty years of Age, of a Melancholick Temperament, troubled with the Scurvy for many years, is wont to find at various times of the year manifold and diverſified Symptoms of it: About his Legs, ſpots and large black marks, like thoſe caus'd by a ſtroke, appear, Belly-achs, and a Looſeneſs frequently trouble him, his Urine for the moſt part appears Lixivial, a Spontaneous Laſſitude, a languiſhing of the Strength, a want of Appetite almoſt conſtantly attend him; beſides theſe ordinary as it were accuſtomed evils, he lives moreover obnoxious to violent Fits of ſickneſs, and thoſe of various kinds. Above two years ſince, when I firſt went to ſee him, he ſorely complain'd of a difficult Breathing, as though he were in danger of being choak't, with a Trembling of the Heart, failings of the Spirits, and a frequent danger of Swooning: Moreover if any thing of theſe paſſions in the Præcordia a little remitted, for the moſt part he was aſſail'd with a cruel *Scotomia* and a *Vertigo*; he ſeem'd to have perfectly recover'd of theſe affects, after that he had taken for ſometime Anticonvulſive Remedies, complicated with Antiſcorbuticks: Butafterward within a few weeks he was affected with a Nauſeouſneſs and a Heart-burning, and with an Inflation of the Hypochondres: His Urine was little and very lixivial, his Belly ſwel'd in a ſhort time, moreover his Feet and Legs growing mighty œdematous, ſhew'd the marks of an invading Dropſie: Afterward the like kind of Tumour ſeis'd the Thighs, alſo the Fleſh of the Back and Arms; which affect nevertheleſs, though it ſeem'd without hope, was eaſily cur'd with Antiſcorbutick Remedies, Cathartick and Diuretick being join'd with them: Notwithſtanding, this worthy Man, though reſtor'd to his Health, did not continue ſo long: For half a year being ſcarce over, he began to complain of a violent Head-ach, with a Vertigo, and an obſtinate Watching; afterward without any evident cauſe, he was ſeis'd with a horrible Vomiting:

Vomiting: In a ſhort time after the Aſthmatick Fits return'd, with a trembling of the Heart, and failings of the Spirits: At this time alſo, when he ſeem'd almoſt paſt hope, he recover'd again in a ſhort while by the uſe of Antiſcorbutick Remedies: From this caſe it clearly appears how great evils the Scorbutick Miaſm, lying hid like a ferment, both in the Blood and in the Nervous Juice, and diſplaying its Venom according to occaſion, may cauſe. Which kinds of affects nevertheleſs, how dreadful and terrible ſoever they ſeem, ſo they depend only of the Humours being vitiated in their Craſis, and not on the Viſcera injur'd in the whole, or in their conformation, for the moſt part they are wont to be Cur'd with little ado, *viz.* by an Antiſcorbutick Method aptly ordered according to the condition of the Patient as well as of the Diſeaſe.

A Renowned Lady, about Twenty five years of Age, of a Sanguine Temperament, and a thin habit of Body, freſh colour'd and handſome, had been ill of a Scorbutick Affect of a long time: For beſides broad Spots and red Puſhes breaking forth in divers parts of the Body, ſhe had been wont to undergo for a long time Pains and bitter Tortures, chiefly infeſting her by night, one while in the Shins, another while in the Arms: In regard ſhe was with Child, ſhe had been forc't to leave off a courſe of Phyſick, often begun in order to its Cure. After her laſt Childbirth, her Lochia flowing plentifully, ſhe continued for many days faint and weak, with a difficult Reſpiration, and being out of Breath upon any motion: A Month after being deliver'd, being taken out of Bed, and attempting to walk, ſhe fell into a moſt ſevere difficulty of Breathing, with a Trembling of the Heart, and a frequent Fainting of the Spirits: Being preſently put to Bed, ſhe continued almoſt for a whole day ſtill Trembling, and continually Panting: Moreover the lower Limbs, as though Death were at hand, being quite chill'd, waxed not warm by any Frictions or Applications of warm'd Cloaths: At length, after near four and twenty hours, upon the frequent giving of ſtrong Cordials, ſhe was better about the Præcordia, though there followed near the right Groin, in the top of the Thigh, a very acute Pain, reaching even to the Leg, and within a few hours a pretty hard ſwelling, reſiſting the touch, poſſeſt all that ſpace: Being call'd at this time, the Diſeas'd ſtill fetching her Breath ſhort and with difficulty, preſently having order'd a Clyſter to be forthwith injected, I gave her twelve drops of Spirit of Harts-horn in a ſpoonful of the following Julape.

Take

Take Water of Snails, ſix ounces, Hyſterick Water four ounces, Water of Wall-nuts, ſimple, and of Pennyroyal, of each three ounces, Sugar one ounce, Caſtoreum tyed in a Rag, and hung in the Glaſs, a Dram. Theſe Medicines were repeated every ſixth Hour.

I ordered a large veſicatory to be applyed to the inward part of the Thigh; then in the Evening, in regard during this whole Fit ſhe had continued without Sleep, I gave her of *Laudanum a grain, Pearls powdred ſix grains, confection of Alkermes without Musk half a dram*: ſhe ſlept quietly, and the next Morning ſhe was much relieved, the pain and ſwelling of the Thigh ſomewhat abated, alſo while ſhe lay quiet in her Bed, ſhe was well about the *Precordia*, but ſitting upright, or turning on one ſide, preſently ſhe ſeem'd almoſt ready to dye through ſtraitneſs of Breath; ſhe continued the uſe of the Spirit of Harts-horn and of the Julep, to be repeated every ſixth hour for many days. Moreover, becauſe ſhe was preſs'd with Thirſt, and made water always in a ſmall quantity, ruddy, and filled with contents, ſhe took twice a day a Doſe of the following Julep to ſix Drams.

Take roots of Graſs, Chervil, preſerv'd Eringos, of each ſix drams, ſhavings of Ivory and Harts-horn, of each two Drams, burnt Harts-horn a dram and a half, Raiſins two ounces, one Apple ſlic'd, Licoriſh two drams and a half, being ſlic'd and bruiſed, let them boyle in three pounds of Fountain Water, till a third part be conſumed: then four ounces of white-wine being added to it, let it be ſtrained into a Flagon, to which put Leaves of Scurvy-graſs, and Brooklimes, of each a Handful; Salt of Wormwood two drams, make a cloſe and warm infuſion for three Hours, let the ſtraining be kept in Veſſels cloſe ſtopt. Sometimes every day, ſometimes every other day a Cliſter was adminiſtred: By the uſe of theſe things ſhe ſeemed to grow better daily, ſo that within a weeks ſpace ariſing from her Bed, ſhe was able to ſit up two or three Hours by the fire in her Chair: but if ſhe kept from her Bed, or walkt a little more than was fitting, ſhe was preſently wont to fall into a ſtraitneſs of Breathing, or a fit of the *Aſthma*, ſo that on a certain day having ſtayed out of Bed too long, ſhe underwent a violent fit of the Diſeaſe, and was affected with a difficult Breathing, a trembling of the whole Body, and frequent Swoonings: Being called again by reaſon of this Relaps of the ſick Lady, I gave her *Spirit of Harts-horn to twenty drops, with the Julep above preſcribed, and in the Evening a doſe of our Laudanum*: and as thereby ſhe found her ſelf better about the Precordia, Pains and Swellings ſucceeded in the right Thigh and Legg, ſuch as before had hapned in the left. I ordered alſo veſicatories to be applyed to that Thigh; and beſides the Remedies hitherto mentioned, ſhe took twice a day of *our Wine of the Juice of Scurvy-graſs four ounces, with two ounces of the Magiſtral Antiſcorbutick Water*: Moreover, I ordered her to be purged with our Solutive Syrup, above preſcribed; which doing well, I ordered it to be repeated within three

or four dayes. By these Remedies she grew well within a Month.

A Noble man about the thirty third year of his Age, seeming to be of a sanguine Temperament, tall and slender, of a very acute Wit, and quick understanding, tho he had used himself for a long time to immoderate and excessive Studies, together with a disorderly way of Diet, yet being still sprightly and full of vigour, he seem'd to enjoy a sound Mind in a sound Body: a little more than two years since, when he had greatly tired himself by dancing a whole Night with Friends, and in the Morning being put in a cold Bed in a Room that was too moist, and having slept a little, he began to be sick; for upon his awake he fell into a mighty troublous Passion about the Precordia, with terrible Swoonings as though he were ready to dye. After a draught of Wine and some cordial Remedies taken, he was a little better, but he often relaps'd, so that all that day both himself and his Friends dreaded either a swoon without returning to himself, or an imminent Apoplexy: Moreover, after that this Fit of the Disease was past, yet still he lived obnoxious to daily passions of the Heart, and upon any great Error committed in Diet, he was wont to be afflicted again with a violent fit. Notwithstanding the use of Remedies, the Disease growing worse within a few Months, did not only infest the Precordia, but in the whole habit of the Body Expansions sometimes of heat, sometimes of cold, moreover in the Limbs a numbness or formication, or light Convulsions, and sudden contractions were raised; but of late, besides the Symtoms hitherto mentioned, which still greatly molest the Noble Person, he is moreover sorely afflicted with a frequent Vertigo, and with Distractions and Failings of the Spirits residing in the Fore-brain, insomuch that he is forc'd to abstain from the Studies and Politick Employs (to which he has been always addicted) and even from any strong intention of the Mind; for otherwise he feels both in the Head and in the *genus nervosum* these troublous Passions, that he may fear either an invasion of the Apoplexy, or horrible Convulsive Affects: a great fit of this Disease pressing upon him, the Ventricle also for the most part is disturbed: Moreover, he has often found ease after a Vomit, either hapning of its own accord, or raised by the help of an Emetick Medicine: Hence some have judged the cause of the Disease to be seated wholly about the Stomach, or Hypochondres: Nevertheless Cathartick Medicines, Emeticks, Digestives, Cephalicks, Antiscorbuticks, Chalybeats, and others almost of every kind, prescribed to this Person for two years by famous Physicians, and also by Empiricks and Mountebanks, have not effected a cure: he lately tryed *Astrop Waters*, but finding himself the worse by them, he presently left them off, and is now advised to drink the *Sulphureous Waters* at *Knaresborough* in *York-shire*: But what success he finds in them I know not at present.

This case in regard by reason of the concourse of the various Symptoms, it does not belong to any peculiar kind of Disease else, is justly referred

ferred to the Scurvy. As to the Method of Cure to be uſed in this and the like caſes, there are two Intentions on which we muſt chiefly inſiſt: *viz.* Firſt, we muſt cleanſe the Maſs of Blood, and withdraw the offenſive Ferments conveyed to it from the Stomach, Spleen, and haply other of the Viſcera. Secondly, the Brain and *Genus Nervoſum* ought to be ſtrengthned, leſt they admit extraneous Particles: and the nervous juice that lyes in thoſe Parts, degenerating from its due Criſis to a ſharp and otherwiſe morbid Nature, ought to be reſtor'd and rectified: the firſt of theſe is perform'd by Catharticks, Emericks, bleeding, and eſpecially ſpecifick Medicines, correcting or wholly taking away the ſcorbutick taint of the Blood: Now that the Iron or vitriolick Spaws, that famous cleanſer of the Blood, did rather injury than give help to this Perſon, the reaſon ſeems to be, both that the Brain being become weak by reaſon of Cephalick Affects, with difficulty throws off the filthy glut of Waters ſent into the Blood, nay, and is in danger of being overwhelmed by it, as it violently makes to its confines: and likewiſe, becauſe when the nervous Liquor degenerating from its Craſis inclines to a ſharpiſh Nature, it is wont to be more perverted by the fluid Salt of the Spaw Waters. Wherefore we generally obſerve that in the Rheumatiſm and Gout the morbid Diſpoſition is increaſt by the drinking of thoſe Waters. The ſecond Intent is excellently performed by Cephalick Remedies, and eſpecially ſuch as are endowed with a volatile Salt, of which kind *are Spirit and Salt of Blood, of Soot, of Harts-horn, the roots and Seeds of Peony, leaves of Miſſletow of the Oak*, &c. with which Antiſcorbuticks are mixt.

The *London* Practice OF PHYSICK,

CONTAINED

In Dr. Willis's *Tract of the Diseases that regard the Corporeal Soul, and its Subjects,* viz. *the Brain and* Genus nervosum.

CHAP. I.

Instructions and Prescripts for the Cure of the Head-ach.

SInce all Pain is an Action violated, or an irksom Sensation depending on the contraction or corrugation of the Nervous Fibres, the subject of the Head-ach must be the parts of the Head that are most nervous, that is, the Nerves themselves, also the Fibres and Membranes, whereof it has many, plac'd both upon and under the Scull; and those parts which are affected with pain are chiefly the two Meninges and their various Processes, the Tunicles of the Nerves, the *Pericranium*, and other *Periostia*; the Muscles, the *Panniculus carnosus*, and lastly, the Skin it self: As to the Brain and *Cerebellum*, and their medullary appendixes, we conclude that these Bodies, in regard they want sensible Fibres, apt to be corrugated and distended, continue free from pain; and so the same is also to be said of the Scull.

Now

Now whenever a pain is rais'd any where about the nervous parts of the Head, its formal cauſe conſiſts in this, that the animal Spirits being ſever'd from each other, and put to flight, cauſe the Bodies that contain them to be withal convuls'd and corrigated, and ſo raiſe that troubleſome ſenſation: And that which ſo diſtracts the Spirits, that a troubleſome ſenſation thence ariſes, is ſomewhat diſproportionate, ruſhing againſt the Spirits themſelves, or the Bodies that contain them, which entring the Pores or Interſtices of the Fibres, ſevers them from each other, and withal forces the Spirits there reſiding to Irregularities.

As to the Prognoſtick of this Diſeaſe; in caſe the morbid diſpoſition be inveterate, ſo that Fits for many years have often return'd of their own accord, and likewiſe upon any ſlight occaſion, we predict that the diſeas'd, though not much in danger of life, will not eaſily be cur'd: Moreover, that the Cure will be yet more difficult, if hypochondriacal, or hyſterick affects often troubling them, are wont at frequent times to raiſe the Head-ach, or if the corrupted taint of an inveterate Venereal diſtemper be radicated in the Part affected.

And if the Head-ach be not only inveterate, but almoſt continual, that we may juſtly ſuſpect it to ariſe from a phlegmonous or ſchirrous Tumour, an *Eryſipela*, Abſceſſes, or Worms, there remains but ſmall or no hope of Cure.

A Head-ach, whether continual or periodical, if it be violent, and has a Vertigo, Vomiting, and other affects, either convulſive or ſleepy joyn'd with it, gives ſuſpicion of great danger; foraſmuch as it frequently paſſes into a mortal Apoplexy, and often into an Epilepſy, Palſey, Blindneſs, Deafneſs, and other Diſeaſes, either very ſevere or incurable.

The Therapeutick method of the Head-ach comprehends many Indications, and thoſe of various kinds, according to the manifold ſpecies, cauſes, and differences of this Diſeaſe, which it will not be eaſie to digeſt, and place all here in an exact order.

An accidental, or occaſional Head-ach, *viz.* ſuch as is wont to ariſe from an evident cauſe alone, without any *Procatarxis*, or previous diſpoſition, as when it happens upon drinking Wine, Surfeiting, being in the Sun, or through a vehement exerciſe, alſo in fits of Feavers, this for the moſt part ceaſes of its own accord, upon the removal of the evident cauſe, and its conſequences; or at leaſtwiſe is taken away by bleeding, reſt, and ſweating.

In every habitual Head-ach, whether continual or intermittent, two chief ſcopes of curing occurr; to which all the other Therapeutick intentions ought to level, and with which proviſion is made againſt each cauſe of the morbid origine.

1. *viz.* In the firſt place, for the cutting off all the fewel of the Diſeaſe, we muſt endeavour, both that the matter flowing, or often-

times

times apt to flow to the affected or ill diſpos'd places of the Head, be either ſtopt, or withdrawn thence to ſome other place: and likewiſe that the Convulſions rais'd in other places, and thence wont to be propagated to the Head be prevented.

2. Then Secondly, in order to the eradicating of the Diſeaſe it ſelf, or (if it may be) of its conjunct Cauſe, we muſt endeavour, that the places of the Head prediſpos'd for Aches (whether only weak, or injur'd in their conformation) being fortified againſt the frequent incurſions of the offenſive matter, recover their ancient ſtate and vigour; which Indication, though it be ſeldom ever perform'd on a ſudden, or throughly, yet ſometimes by a long and diligent care, the morbid root, how fix'd and radicated ſoever it be, is conſum'd.

As to the firſt ſcope of Curing, which we muſt firſt and chiefly have reſpect to, we ſay that the matter, or Humours, that are wont to be heap'd together about the parts of the Head prediſpos'd for a Head-ach, and to raiſe the fits of the Diſeaſe, are the Blood, or its *Serum*, or the nutritive or nervous juice. Moreover, with all theſe, vapours and *effluvia*, alſo excrements, ſometimes bilous, ſometimes melancholick, ſometimes acid, ſalt, ſulphureous, and others of various kinds being receiv'd into the Blood from the *Viſcera*, ſometimes theſe, ſometimes others, are convey'd along with it to the Head; againſt the ſalleys and incurſions of all which, let Phyſical defenſatives be ordered.

1. And firſt, if the *Procatarxis*, or diſpoſition for pains being plac'd about the Membranes of the Head, the Blood, as being hot, and apt for turgeſcencies, ruſhes now and then all of a ſudden into the Membranes of the Head, and upon its not eaſily paſſing them, ſtretches the Veſſels above meaſure, and ſevers from each other the nervous Fibres, and ſo raiſes fits of this diſeaſe: (a ſign of which are a ſanguine temperament, heat, and a ſuffuſion of redneſs in the Head about the Face, alſo a high and vibrating Pulſe, with Veins ſtrouting with Blood; we muſt preſently endeavour both that the Blood being rendred more calm, be not ſo readily put upon turgeſcencies; and alſo that when ſtirr'd and boyling, it be not carried with a greater ſalley to the Head than to other Parts, nor be not forc'd there to ſtagnate, by reaſon of the *Sinus*'s of the Meninges being too much fill'd: Wherefore, if the fit continues long, let the Perſon be blooded in the Arm, or in the Jugular Vein; out of the Fits it is ſometimes proper to draw Blood from the Veſſels of the Fundament by Leeches; to wit, that by this means the Blood haply boyling, may be drawn downward towards that place, whither it often tends of its own accord: Let *Oxyrhodinums*, or other Epithems be applied to the Head; moreover, let Juleps, Emulſions or Decoctions, which allay the fervour or fury of the Blood be taken: Let the Belly be cooled and kept ſoluble by the uſe of Clyſters: Moreover, for prevention, Whey, or the

the uſe of Spaw-waters is convenient; alſo drinking of Water, a thin and cooling dyet do good: You muſt order a forbearance of Wine, Spices, Bathing, Venery, any violent motion of the Body or Mind, and all hot things: Moreover, for fixing the Blood, and preventing its effervescencies, let diſtilled Waters, expreſſions of Herbs, or Decoctions, Electuaries, Powders, and eſpecially Cryſtal Mineral be frequently us'd: It will not be needful to ſubjoyn here a method, or particular forms of Medicines, becauſe in this caſe almoſt every Perſon that is ill, being taught by frequent experience from things that do him good or hurt, is wont to be his own Phyſician.

2. It is ſeldom that the Blood is in the fault alone, or only by it ſelf: Other Humours oftner, being carried to the Head by the conveyance of the Blood, and there depos'd, cauſe the Evil: If at any time therefore a filthy glut of *Serum* breaking forth in abundance from the Blood, cauſes frequent Head-achs (the ſigns whereof are Catarrhs at the ſame time infeſting the other parts, *viz.* the Noſtrils, Mouth, or *Trachea*) then abſtinence and reſt being commanded, and the Belly being emptied by a Clyſter, let the fluxion of the *Serum* be permitted to appeaſe it ſelf, and the matter diſcharg'd on the Membranes of the Head to evaporate: Which if they do not follow of their own accord, and in a ſhort time, in a hot conſtitution Bleeding often is proper; *viz.* inaſmuch as the Veſſels being emptied of Blood, ſuck in again the extravaſated *Serum*: But in cold Perſons Veſicatories applied to the Neck, or behind the Ears, are of excellent uſe: Then after that the Belly is emptied by a Clyſter, let the fluxion be appeas'd by the uſe of an *Anodyne*, or gentle *Opiat*: and that being appeas'd, it is proper to give a gentle Cathartick, and then Medicines that operate by Urine, or Sweat, or together by both, and ſo gently evacuate the ſuperfluous Seroſities.

Medicines fit for theſe ends are every where to be found in Books, which nevertheleſs may not be us'd raſhly and indifferently by Empiricks, but they ought to be choſen, compounded, or altered, nay, and ſometimes to be prepared *Extempore*, as occaſion requires, according to the judgement and diſcretion of a prudent Phyſician, reſpect being always had to the Conſtitution, Temperament, *Idiocraſis*, and other accidents and circumſtances of the Patient. Wherefore, in regard it would be ſuperfluous to heap together here a great many Receipts, I have rather thought fit to propoſe here only a form or two of the Medicines of each kind, *viz.* of ſuch as regard the chief Intents.

Take Pills of Amber half a dram, Roſin of Jalap four grains, Balſam of Peru *what ſuffices, make four Pills; let three be taken going to Bed, and the next morning, if the former do not work enough.*

Or, *Take Scammony ſulphurated half a Scruple, Ceruſe of Antimony fifteen grains, Cream of Tartar eight grains, make a Powder, let it be taken in a ſpoonful of* Panada *early in the morning.*

Take

Take Sulphur of Antimony four grains, Roſin of Jalap five grains, Cream of Tartar ſix grains, let them be bruis'd together, and with a ſufficient quantity of Conſerve of Violets make a Bolus to be taken early in the morning with Governance.

Take roots of Butchers-broom, the great Bur-dock, Chervill, Avens, of each an ounce; preſerv'd Eringo's an ounce and a half, Florentine Orris three drachms, the leſſer Galingal a drachm and a half, Bur-dock-ſeeds three drachms, dryed leaves of Betony, Sage, Vervain, Fluellin, of each half a handful, Raiſins ſton'd two ounces, boyl them in four pounds of Fountain Water, till a third part of it be conſum'd; then add of White-wine half a pound, ſtrain it, let it be ſweeten'd (if need be) with Syrup of the five roots two ounces, let ſix ounces be taken warm twice or thrice a day a good while after meat.

For ſuch as have a Cold and Flegmatick conſtitution, let a *Decoction* be prepar'd *of the Wood Guiacum, Saſſafras, Sarzapar*: With the addition of the foreſaid Ingredients make an Apozeme, whereof let ſix or eight ounces be taken twice or thrice a day warm.

For Poor People, and often to the Rich, I uſe to preſcribe, with good Succeſs, a *Decoction of the dryed Leaves ſometimes of Sage, ſometimes of Betony, Vervain, or of Roſemary, made in fountain Water, and then impregnated with the Tincture of the Powder of Coffee-berries, to be taken twice a day warm to ſix or eight Ounces.*

3. But, if with the abounding *Serum*, Particles alſo ſaline, acid, bilous, or otherwiſe infeſting, are violently carried into the Membrances of the Head, either wholly from the Maſs of Blood, or by the Mediation of this, as receiv'd from the Viſcera, and there being fix'd, cauſe more acute and laſting Pains; then it will be proper ſometimes to repeat a ſpare Bleeding, and alſo a gentle Purging: to apply Anodyne, and mitigating Epithemes to the Places affected, and alſo often to give gentle Hypnoticks by frequent changes, Apozemes alſo, and Juices, and Expreſſions of Herbs, that allay the Fervour of the Choler, and gently carry it off by Seige and Urine, are of excellent uſe: but in the mean time, let ſmart or ſtrong Medicines, whether they operate by Seige, Urine, or Sweat, in regard they too much fuſe, and exagitate the Blood and Humours, be carefully avoided. I have often obſerv'd in Perſons troubled with an acute and obſtinate Pain of the Head, that the *Serum* ſwimming on the Blood, when let forth, have been ting'd with a Yellowneſs, or with bilous excrements incocted in it: and that alſo in this Caſe a ſpare and frequent Bleeding, and afterward a free drinking of Whey and Spaw-Waters, have given a notable Relief, and beyond other Remedies.

4. Moreover, if the Parts of the Head ſuffer through the Fault of ſome one of the Viſcera, as of the Stomach, Liver, Spleen, Womb, or any other, (by reaſon of the Tranſmiſſion of the ill Ferment) then in the Cure of the Diſeaſe, let ſuch Remedies as regard the Viſcera be admini-

administred together with Cephalicks: hence, to certain Persons troubled with the Head-ach, whose Stomach also is in a Fault, *Elixir Proprietatis*, *Mynsichts Elixir of Vitriol*, *Tinctura sacra*, *Vitriolum martis*, *the compound powder of Aron Roots*, and other things vulgarly accounted for Stomachals, often do good; to others whose Heads participate of the evils of the Spleen, Chalybeats often give help: Some Women sometime find ease of their Head-ach by hysterick Remedies; in like manner, when the Faults of other Parts contribute to the Head-ach, let the coindicated things taken from those Parts, be joyned with the first things indicated.

5. Sometimes the *nutritive Juice* is the Cause of a periodical Head-ach; *viz.* in as much as being mix'd with the Blood, and not duely assimilated, it causes a Turgescency in it by reason of its disagreeing Particles; so that the Blood boyling to the Head, throws off its Refuse in its Meninges, or certain Parts of them predispos'd for it; and so irritates the Fibres to painful Convulsions. For this Reason, I have known many to have been obnoxious to a daily Head-ach after the Measles, Small-Pox, and other Fevers or Sicknesses, with which the Mass of Blood is wont to be vitiated; *viz.* so many Hours after Meals, sometimes sooner, sometimes later, first a flushing of Blood in the Face, then a Plenitude and Pain in the Head infested them: moreover, after drinking of Wine, or eating of turgid Food, they were more severely punish'd. The Access of the Distemper is wont to happen sooner or later after they have eat or drunk according as the Chyle begins to grow turgid either a little after its first entrance into the Blood, or after it has stay'd some while in it.

This affect is free from Danger, and for the most part is easily enough cur'd. After a Provision being made for the whole, a gentle Purge, and sometimes blooding being ordered, Remedies which restore the Crasis of the Blood, such as are chiefly antiscorbuticks, and Chalybeats, prove mighty beneficial.

Take Conserve of Fumitory, Tansey, Wood Sorrel, of each two Ounces, compound Powder of Aron Roots three Drams, Ivory, Crabs Eyes, Coral prepar'd, of each a Dram and a half, powder of yellow Saunders, Lignum Aloes of each half a Dram, Vitriol of Mars a Dram, salt of Wormwood a Dram and a half, Syrup of the five Roots what suffices, make an Electuary: let the Quantity of a Chesnut be taken in the Morning, and at five a Clock in the Afternoon, drinking after it three ounces of the following Liquor.

Take Water of the Leaves of Aron, Vervain, and of the Flowers of Elder of each six Ounces, magistral Water of Snails, and Earth-worms of each two Ounces, Sugar an Ounce, mix them.

Various Medicines, wont to be us'd against the *scorbutick Diseases of the Blood*, may be rang'd here, and giv'n with good Success; for Head-aches, which are so familiar in the Scurvy, oftentimes proceed from

the Fault of the Blood perverting the nutritive Humour, and discharging its Recrements in the Membranes of the Head: wherefore, the Remedies mention'd by me elsewhere against that affect, claim a place also here.

6. There remains yet another Humour, to wit, the *nervous Liquor*, which being carried into the Fibres of the Meninges and other parts of the Head, sometimes becomes disproportionate to the Fibres by its own disagreeing nature, as it is sharp or otherwise degenerate, sometimes twitches the containing Parts and irritates them into Convulsions or painful Distentions, as it strongly ferments with some other humour, *viz.* the nutritious or serous Humour flowing thither.

The nervous Humour, where it is thus morbifick, either being vitiated in its whole Mass, brings a very great Injury on the Brain predispos'd for it, or being faultless of it self, is perverted within the Fibres affected, and so becomes morbifick secondarily; the Cure of which then depends on the Restitution of the containing Parts; *viz.* If the Weaknesses of the Fibres, or their injur'd Conformations be amended, the Humour irrigating them, will presently be free from Fault. With what Remedies the Defaults of the Parts predispos'd for Head-achs are remov'd, we shall presently acquaint you.

Mean while, if the nervous Humour, being degenerate in its whole Mass, causes a great Offence to the Head predispos'd for Pain, let those kinds of Medicines, and that method be us'd, with which being reduc'd to its due Crasis, and gently passing through those Fibres, it may irritate them little, or not at all: for which end, neither strong Purging, nor large or frequent Blooding are proper, in regard they exagitate the Blood and Humours, and impair the Strength, and consequently give a greater Acrimony and Rage to the nervous Humour which was faulty before. But gentle Loosners, and a spare Bleeding, will now and then be of use; whereby the Viscera may be cleans'd, and the Mass of Blood be somewhat purg'd, and a way be prepar'd for other Medicines which will succeed the better afterwards.

Now the Medicines that render the nervous Liquor more friendly and benign to the Membranes of the Head, which are wont to be offended by it, are those which are vulgarly call'd Cephalicks, *viz.* whose Particles, being active enough, and withall fine and subtle, pass the Blood without any Turgescency or Tumult; and then insinuating themselves into the nervous Liquor, gently actuate it, and cause the *Ductus*'s of the Nerves so to open themselves, that thereby the animal Spirits more freely irradiate all Bodies both sensible and motive, and inspire them without Swoonings, Convulsions, or anomalous Distentions.

Theſe kinds of Remedies, tho not always efficacious, nevertheleſs often remove ſome Head-achs that are not very inveterate, and in others, tho never ſo obſtinate, they frequently do good: moreover, thoſe things that are preſcribed againſt Pains of the Head, are alſo given againſt Affects of the Brain and *Genus Nervoſum*, and on the contrary, the things that are preſcrib'd in theſe are alſo given with good Succeſs againſt thoſe; *viz.* the Vertue of them being diſplay'd within the Brain, does good againſt the Apoplexy, Palſie, Lethargy, and other Diſeaſes allied to them, alſo within the moving Fibres againſt Cramps and Convulſive Motions; and likewiſe exerting their Forces within the ſenſible Fibres, they often relieve Pains.

Great ſtores of theſe Medicines are vulgarly ſet forth in Phyſical Books, but ſo, that their Plenty has brought either a Poorneſs or Confuſion to the method of healing; thoſe things which would do moſt good, often lying hid, or being concealed amongſt that confus'd heap of Remedies; even as Wheat is with more difficulty ſeparated from much Chaff, than it is firſt gotten clean from the Ear. Therefore in this Caſe Proviſion being made for the whole, and then thoſe things being given both by Dyet and Phyſick, which put a ſtop to or preſently appeaſe the Turgeſcencies of the Blood, let the Medicines call'd Cephalicks, or ſuch as remove the Diſorders of the nervous Juice, be preſcribed to be carefully taken: I ſhall ſet down ſome few Forms of theſe.

Take Conſerve of Flowers of Betony, and Clovegillyflowers of each three ounces, Powder of male Peony Roots half an ounce, baſtard Dittany a dram, lignum Aloes, yellow Saunders of each a dram, red Coral prepared, Pearl, Ivory, of each an ounce and a half, Salt of Vervain a dram and a half, ſyrup of Peony flowers what ſuffices, make an Opiate; let the quantity of a Cheſnut be taken, drinking after it of the following Julep, three ounces.

Take Water of Black-Cherries, Wallnuts ſimple, Vervain, of each four ounces, Water of Cowſlip-flowers three ounces, compound Water of Peony three ounces, Sugar ſix drams.

Or, *Take Leaves of Vervain, Miſtletow growing on Apple-trees, of each ten handfuls, male Peony Roots two pounds, Mace, Nutmegs, of each half an ounce, Coriander Seeds an ounce, being ſlic'd and bruiſed, pour to them of freſh Milk eight pounds, (or of Milk ſeven pounds, Malaga Wine one pound) diſtill them with common Organs, let the whole Liquor be mixt. Let three Ounces be taken at a time.*

Take Powder of male Peony Roots half an ounce, red Coral prepared two drams, Ivory, Pearl prepared, of each a dram, make a fine Powder of them all, add of Sugar diſſolv'd, and boyl'd to a Conſiſtency for Tablets in a ſufficient quantity of Black-cherry Water, ſix ounces, Tincture of Coral a dram, make Tablets according to Art weighing half a dram, let

three or four be eaten in the Morning, and at five a clock in the Afternoon, drinking after it a little draught of Tea.

Or, *Take Tincture of Coral an ounce, take from fifteen drops to twenty twice a day in a little Draught of the Julep or diſtill'd Water.*

Thoſe that are of a cold or flegmatick Temperament, may *take twice a day a Doſe either of the Tincture of Antimony, or of Spirit of Armoniack impregnated with Amber or Coral, or of Spirit of Harts-horn, or of Soot in an appropriated Vehicle.*

The uſe of *Millepedes* ought not here to be omitted, or ſet lightly by, in regard that *their expreſs'd Juice, diſtill'd Water, and alſo the Powder prepar'd of them,* often contribute egregiouſly to the Cure of ancient and obſtinate Head-achs. I might here propoſe many other Medicines of various kinds; nay, tranſfer hither, the forms in a manner, of all thoſe which I have formerly heap'd together againſt convulſive Affects. But the moſt difficult thing of all concerning the Cure of the Head-ach, yet remains; *viz.* How the Conjunct, and fixt Cauſe of this Diſeaſe, conſiſting in the Weakneſs or injured Conformation of the Fibres, may be heal'd or remov'd.

Now this, though it will be ſometimes incurable, as when a ſchirrous, or callous, or ſome other ancient and fix'd tumour, has poſſeſt the Meninges; nevertheleſs, ſince the Diagnoſtick of this is uncertain, and the Procatarxis of a Diſeaſe, how unconquerable ſoever it may ſeem, ſometimes by a continued method of Cure is overcome; therefore in every kind of Head-ach, as long as the Patient will admit of Remedies, let not a Phyſician be backward in preſcribing thoſe things that ſhall ſeem moſt proper.

Therefore in the firſt place, as we hinted even now, we muſt diligently endeavour, that the Fuel of the Diſeaſe being cut off, and intercepted, the frequent Acceſſes of the Fits be ſtopt; for ſo the indiſpoſed Fibres, whilſt they are no longer moleſted, ſometimes recover their ſound ſtate, Nature alone effecting the Cure.

The helps of the Art of Phyſick, indicated in this Caſe, are taken from Chirurgery rather than from Pharmacy; for whatſoever is taken by the Mouth, paſſing through long Circuits, ſpends all its Virtue before it reaches the Membranes of the Head.

Amongſt Chirurgical things, firſt Topical Remedies occur, and of thoſe, Plaiſters are of moſt advantagious uſe, and often prove very beneficial. Let not theſe be extreamly hot, which may draw the Humours more to the place affected, but moderately diſcuſſing and corroborative. I uſe to preſcribe, *Emplaſtrum de Minio*, or *Diaſaponis*, with a half quantity of *Paracelſus*'s *Plaiſter*, to be applyed to the Place grieved after it is ſhaved, and to be worn for ſome time. As to the Ancients frequent uſe of *Phenigms and Sinapiſms*, and to the preſent Practice of applying *Veſicatories* againſt violent Head-aches, ſometimes to the whole hinder part of the Head, ſometimes to the

Sinci-

Sinciput: if at any time eaſe has enſued theſe hot Topicks, it was for this reaſon, Becauſe by thoſe Adminiſtrations a mighty ſtore of ſharp Serum was voided from the Part affected.

Liniments of Oyls, and Unguents, tho frequently us'd, do little; becauſe (as I geſs) in caſe they penetrate deep, they render more lax the Tones of the Fibres, whereby they lye more readily open to the Incurſions of the morbifick Matter; moreover, they ſtuff the Pores of the Skin, that the *Effluvia* do not evaporate: for the ſame Reaſon, in a manner, it is, that warm Fomentations, prepar'd of Aromatick, or other cephalick Decoctions, often do Hurt than Good, becauſe they draw Humours towards the Parts affected, and withall, open the Pores and Paſſages, whereby they are more readily admitted; and therefore alſo it is, that bathing of the Head, by pumping Water on it in hot Baths, is uſed to Perſons troubled with the Head-ach with no better Succeſs: whereas, on the contrary, it would be good for many to waſh their Temples, Fore-head, and Sinciput, every Morning and Evening, with cold Water: nay, to bath their Heads every Morning by pumping cold Water on it, or at leaſtwiſe, to dip it in a deep Veſſel or Well.

Another Chirurgical help cryed up for the Head-ach, eſpecially if violent and inveterate, is wont to be a burning or cutting of *Iſſues* in ſeveral parts of the Body: It's a thing without doubt, that theſe being made in the Arms or Leggs, are both leſs troubleſome, and prove ſomewhat beneficial; *viz.* inaſmuch as they withdraw the fuel from the Part, and lead it far away from the place affected: Moreover, an Iſſue in the *Nucha*, and a *Setaceum* in the Neck, alſo in the lap of the Ear, or near it; and likewiſe a pellet of the Roots of Wild Black Hellebore ſtuck in the lap of the Ear perforated, inaſmuch as they evacuate much ſeroſity, and cauſe more to paſs towards the emunctories, *viz.* the Glands are often us'd with benefit. But there is a great deal of talk and a greater reputation concerning *Cauteries* applied to the place griev'd, or near it, ſo that large Iſſues are made in the crown of the Head, or near the Commiſſures of the *Sutures*. If we meaſure the fruit of this practice from the ſucceſs, it will appear to be little and ſeldom beneficial, but often unfortunate; for I have not known any perſon cur'd by theſe kind of Cauteries, but many aking Heads to have grown worſe thereby. And truly Reaſon dictates it; for whereſoever an Iſſue is burnt, a ſerous humour flows to that place from the whole maſs of Blood, and conſequently from the whole Body; and it is often heap'd together there in too great a ſtore, that it may be conſtantly voided by that emiſſary: Wherefore about Iſſues, Inflamed ſwellings, puſtules, and various humours every where ariſe: What therefore can we ſuſpect leſs, than that Cauteries being applied near the place griev'd of the Head, but they will cauſe the Morbifick matter to be more heap'd together there.

There

There remains yet another Chirurgical operation, extoll'd by many for an obſtinate Head-ach, but tryed as yet by none (that I know) to wit, the opening of the Scull with a trepand Iron near the place of the pain: Our famous *Harvey* endeavour'd to perſwade a Lady of great quality to this, who was troubled with a terrible and inveterate Head-ach, promiſing her a Cure thereby; but neither ſhe nor any other has been content to admit of the adminiſtration: Truly it does not appear to me what certainty we may expect from the Sculls being opened where it pains; if an Abſceſs lay hid there, this were the only way of Cure; but that is wont to cauſe the ſleepy, or mortal Convulſive affects, rather than to take away the Head-ach: if an inflamed Swelling, or Puſtules, or an *Eryſipela* has ſeized the *Diploïs*, I know not whether thoſe tumours expoſed to the naked Air will evaporate more eaſily, or whether remedies applied to them, when bare, will do any thing or not: And in caſe the pains ariſe by reaſon of the Meninges being beſet with tubercles, or a ſchirrous, or callous Tumour, I judge the opening of the Scull will turn to little or no benefit.

But this being paſt by till it comes in practice, let us proceed to other things: And now let us conſider whether Salivation be to be uſed for curing old and confirmed Head-achs; in truth if the pains ariſe from the Venereous Diſeaſe, I make no queſtion but this way ought to be taken; but thoſe that have tryed that kind of remedy, in Head-achs proceeding from other cauſes, have not reaped a Harveſt anſwerable to ſo laborious a cultivation; I confeſs the examples of certain perſons have ſcared me from trying that method in thoſe kinds of caſes. A certain Lady of great quality (whoſe diſtemper I ſhall ſet forth beneath) for curing a violent and long continued Head-ach, has undergone three copious Salivations, *viz.* firſt by a Mercury Ointment directed by Sir *Theodore Mayern*, and afterward twice by taking the late famous Powder of *Charles Huis*, and this without any relief, (and I wiſh it were not with ſome detriment to her) for ſince for many years, even to this day, ſhe has given ground to the cruel Tyranny of this diſtemper growing by degrees upon her. It fell out ſomewhat worſe than this with that excellent man, *D. G. D.* for the cure of whoſe ancient Head-ach, when a Mercury Ointment was applied to his Head pained, the Salivation raiſed thereby, made him blind, without curing the diſeaſe. Truly every man, duly conſidering the operation of Mercury in the Body of man, ought to dread theſe kinds of effects from the rash giving of it: For, not to ſay that Mercury is malignant, or wholly venemous, *viz.* inaſmuch as from its united Particles little or no hurt is cauſed; ſo that often a great quantity of Quick-ſilver is taken with ſafety enough; nevertheleſs, the Mercurial Corpuſcles being divided, and ſeparated from each other, (whether it be done by Chymical Salts, as in ſublimated and precipitated

pitated Mercuries, or by percolation through the Pores of the Skin, when an unction is made) they preſently become exorbitant and maſterleſs, and raiſe more turbulent commotions in the Body of Man than any Medicines beſides: they ſometimes infeſt the Nervous Parts firſt, wherefore by reaſon of the Fibres of the Ventricle, Inteſtines, and other of the *Viſcera* being fretted, Gripes, horrible Vomitings, moſt ſharp and often Bloody Stools, Cardialgias, Swoonings, and other terrible affects frequently happen ſoon after the Medicine is given: But ſometimes the Particles of the Mercury, when they are not preſently diſſolv'd, without offending much the *Viſcera*, ſcarce exert their forces before they are conveyed into the maſs of Blood: Therefore being mighty active, and diſplaying themſelves every way, they readily enter this, and preſently infecting the whole, exagitate it, and often (when they are more fully diſſolv'd) ſtir it to a great effervescency: then the Blood, to clear it ſelf of the diſagreeing Particles, beginning to ferment, delivers them that way it may, to the humours contained within it ſelf, *viz.* the *Serum*, and Nutritious Juice, and throughly mixes them in it, and withal endeavours to diſcharge it ſelf of thoſe, being imbued with ſo preternatural a mixture. Now this is not done eaſily, or plentifully enough by Urine, or Sweat, for the *Liquamina* of the Blood being become more viſcid and groſs, from the Particles of the Mercury incocted in it, than that they may paſs the ſmall colatories of the Reins or Skin, ſometimes breaking forth (unleſs they are ſtopt) by the Cæliak Arteries, paſs away upon raiſing a Diarrhœa or Dyſentery, the intent of Salivation being thus letted or fruſtrated; but oftner the *Latex* being imbued with Mercury remaining within the Blood, which is alſo ſomewhat infected, and being carried violently with it hither and thither by the Veins or Arteries, butts againſt various Parts, and a way being made, either breaks forth outwardly, or is hurl'd into the *Viſcera*, Membranes, and other Parts, often with great prejudice. Moreover, ſome Mercurial Particles alſo ſeem to penetrate the Brain, and inſinuating themſelves into the Nervous Juice, to be diffuſed not only through all the inward parts of the Head, but through all the Nervous Parts, and ſo in ſome ſort to ferment the nervous liquor.

But in the mean while the Mercurial Seroſities remaining in the Blood, are depos'd for the greateſt part in the Glands, which are the proper emunctories of the Arteries: Wherefore, ſince about the parts of the mouth both a great many, and very great Glands are plac'd (to which a mighty ſtore of *Serum* is ſent for Spittle) and from thoſe the open *Ductus*'s by the excretory Veſſels gape into the cavity of the mouth, certainly by this way chiefly, the envenom'd *Latex* of the Blood will find its paſſage forth, which it cannot readily do elſewhere. Wherefore, upon a Salivation being rais'd, the Blood long fermenting, like Wine or Beer purging it ſelf, throws off by the

the *Ductus Salivales*, and the innumerable *Meatus* every where gaping into the Mouth, whatſoever extraneous and degenerate ſubſtance it may either contain within it ſelf, or can drink up, or receive from elſewhere, be it from the *Viſcera*, or ſolid Parts, or from other humours. Moreover, it is likely, that as the off-ſcowrings of the Blood, ſo alſo thoſe of the Liquor that irrigates the Brain, and Nervous Appendix, being ſtirr'd upon the entrance of the Mercury, are voided forth alſo this way, *viz.* by the *Ductus Salivales*.

Therefore a Salivation caus'd by Mercury, if haply it ſucceeds well, removes ſometimes difficult and indeed Herculean diſtempers, and ſuch as will not be maſtered by any other Remedies, *viz.* foraſmuch as this operation, by a long expurgation, throughly cleanſes the Blood and nervous Juice, and other humours, deſtroys all exotick ferments, quells the enormities of Salts and Sulphurs, and alſo exagitates the morbifick matter ſticking any where, or ſtagnating, and often leads it forth.

Nevertheleſs, this Medicine is not always free from danger, *viz.* becauſe the Mercury being become exorbitant, and carrying with it a mighty ſtore of moſt ſharp, and as it were, envenom'd *Serum*, and ruſhing violently into the noble Parts, and eſpecially the Brain; with the appendixes, both medullary and nervous, or into the Lungs and *Præcordia*, brings upon them an indelible, and ſometimes a mortal prejudice: Wherefore, in an ancient and ſore Head-ach there is danger leſt the indiſpos'd Fibres be more irritated by the Mercury pervading them with much and Corroſive *Serum*, and be put upon greater Convulſions and painful Corrugations: And alſo, leſt upon the mighty recourſe of Humours to the Head, the Brain be invaded, and conſequently (which happens too often) leſt the ſleepy or Convulſive affects be cauſed: I would have diſcourſed more concerning theſe things, becauſe it is of a great concern, but that we daily expect an exact method of Salivation, and a full account of it, as to its ways and effects, advantages or diſadvantages, to be ſet forth by the Learned Phyſician, Dr. *Needham*.

From Chirurgery there remains yet another famous remedy for curing inveterate Head-achs, *viz.* the opening of an Artery: Some of the moderns uſe this, and very much extoll it, it being greatly accounted of amongſt the Ancients: Nevertheleſs, as far as it has appeared to our obſervation, ſucceſs has often been wanting to that ſo much cryed up operation: Nor is it a wonder, becauſe that ground on which the Ancients relying, blam'd the Arterious Blood, as differing from that of the Veins, and more exorbitant, and therefore adviſed it to be let forth, does not hold good: Nor indeed is there any other reaſon, wherefore Blood drawn from an Artery rather than from a Vein near the place grieved, ſhould give eaſe, but rather on the contrary we may expect a greater help from the opening of a Vein; becauſe an

Artery

Artery being emptied, receives and draws away nothing from the part affected; but a Vein being opened, in the place of the Blood iſſued forth, draws from the whole Neighbourhood, and often drinks in again, and reſtores to circulation the Blood, and other humours heaped together, and ſtagnating near the ſeat of the Diſeaſe. However, leſt we recede too far from the practice of the Ancients, attributing nothing to Arteriotomy, we grant that ſometimes haply it gives help tho, not immediately and cauſally, but only by way of conſequent, and *per accidens*, *viz.* foraſmuch as the ends of a cut Artery grow together, ſo that the paſſage for the Blood that way is ſtopt for the time to come; hence in regard ſomewhat a leſs ſtore of Blood is brought towards the place by the Arteries, and an equal quantity is ſtill carried away by the Veins, therefore it ſometimes happens that the fuel of the morbifick matter is diminiſhed, and that its ſtock is conſumed by degrees. For this reaſon that adminiſtration has often ſucceeded well in diſtempers of the Eyes. Moreover, Farriers uſe a practice not unlike this for curing malignant tumours in Horſes Legs; to wit, they take and bind the Artery by which the matter flows to the part affected; mean while that which was there ſticking, partly evaporates, and partly is drunk up again by the Vein. I have heard that in a manner the ſame method was ſucceſsfully tryed by our *Harvey*, for curing *ſtrumous* and *ſchirrhous tumours* alſo in the Body of man. I might here ſet down many other kinds of Remedies, and alſo Preſcripts and forms of Medicines which are wont to be uſed both by Phyſicians and by Empiricks, for curing Head-aches; but the Books of Phyſicians abound too much with theſe. I ſhall now give you ſome rare caſes of Perſons troubled with the Head-ach, and firſt ſome examples of a moſt ſevere continual Head-ach, which alſo, the cauſe being invincible, has often proved fatal.

A Woman, fifty years of age, after that ſhe had been ill for about ſix months with a very great pain of her Head, troubling her almoſt continually under the *Sagittale Suture*, and yielding to no Method or Medicines, fell at length into a Lethargy, with a Partial reſolution of her Limbs, from which nevertheleſs being in a ſhort time recovered by remedies ſeaſonably adminiſtred, ſhe had again the violent pain in her Head as before, and afterward within a fortnight or three weeks falling into a ſleepy affect, ſhe departed this life: The Scull being opened, on the ſide of the third *Sinus*, a ſchirrhous tumour three fingers broad grew to the Membranes, by the mediation of which, the *Dura Meninx* alſo for ſome ſpace grew to the *Pia*; and the Blood Veſſels which ought there to open into the cavity of the *Sinus*, were ſtopt; moreover, both the outward *Anfractus* of the Brain, and its inward cavity, were filled with clear water. From theſe obſervations the invincible, and at length mortal cauſe of that Diſeaſe may plainly appear. I remember formerly to have obſerved

by Anatomy a caſe like to this, in a certain other Perſon. Moreover, in regard I judge that in many Perſons troubled with the Head-ach, the Diſeaſe depends on ſuch an invincible cauſe, I ſhall here give you one inſtance that is quite freſh of that kind of affect.

Some few years ſince I was called to ſee a Lady of Quality, troubled for above twenty years with a Head-ach, which at firſt was intermittent, but of late is almoſt continual. She was endowed with admirable gifts both of body and mind, ſo that ſhe was excellently skilled in the Liberal Sciences, and all Learning, above the condition of her Sex; but (as tho Nature thought it too much for her to enjoy ſo great endowments without ſome affliction) ſhe has ſuffered very ſorely from this diſeaſe: Before ſhe was eight years of age, upon her recovery from a dangerous Fever, ſhe became obnoxious to pains of her Head, which were wont to ariſe ſometimes of their own accord, but oftner on ſome light occaſion offered; the diſeaſe being not limited to one place or part of the Head, ſometimes infeſted the right ſide, ſometimes the left, and often its whole circuit. During the acceſs (which ſeldom ending within the ſpace of twenty four hours, often infeſted her for two, three, or four days) ſhe could not endure light, ſpeech, ſound, or any motion; but ſitting upright in her Bed in a darkned room, ſhe was able to ſpeak with none, nor to take any reſt, or food: at length, as the Fit declined, ſhe uſed to fall into a deep and troubled ſleep; from which awaking, ſhe was wont to be better, and then by degrees to recover, and during the time of intermiſſion to be indifferently well. Formerly the Fit being raiſed only occaſionally, ſeldom returned within twenty days, or a month, and then afterwards much more frequently; but of late ſhe is ſeldom free from them. Moreover, through many occaſions, or rather evident cauſes (ſuch as are the changes of the Year, and of the Air, the great Aſpects of the Sun and Moon, violent paſſions, and errours in diet) ſhe is ſorely tormented with them. Now tho this affect having ſorely afflicted this noble Lady (when I went to ſee her) above twenty years, and pitching its Camp near the Confines of the Brain, had ſo long beſieged its Royal Fort, however it had not yet gotten poſſeſſion of it: But the diſeaſed being free from a *Vertigo*, *Scotomia*, Convulſive affects and any ſleepy ſymptom, had ſtill the chief Faculties of her Soul whole and ſound.

In order to the obtaining, or rather endeavouring a Cure, throughout the whole progreſs of the Diſeaſe, a great many Remedies, preſcribed by moſt skilful Phyſicians, as well of our Country, as Foreigners, were uſed without any ſucceſs, or eaſe: She tryed all the Great Remedies of every kind and form, but always in vain: a great many years ſince ſhe underwent a long-continued, and moſt troubleſome Salivation, by a Mercury Ointment, ſo that ſhe incurred a great danger of Life. Afterward a Cure was twice undertaken by a Flux,

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tho to no effect, by a Mercury Powder, (which the famous Empirick *Charles Huis* generally gave): She tryed hot Baths, and drank Spaw-waters almoſt of every Country and Nature, with the like ſucceſs as the reſt: She was frequently blooded, and once in an Artery; ſhe went with many Iſſues, made ſometimes in the Sinciput, ſometimes in the hinder part of the Head: She took the Air in divers Countreys, *viz.* beſides her Native, that of *Ireland* and *France*: She took Medicines of all kinds whatſoever; to wit, Cephalicks, Antiſcorbuticks, Hyſtericks, all famous Specificks, nay, and Empirical Remedies, given both by the learned and unlearned, by Mountebanks and old Women; yet ſhe declared that ſhe had not received any where from any remedy, or method of Cure, the leaſt help or relief: But the refractory and obſtinate Diſeaſe, being deaf to all inchantments of Medicines, would not be maſtered. Moreover, having poſſeſſed ſo long the precincts of the Brain, tho it could not enter its receſſes, yet when I went to ſee her, extending its limits into certain other parts of the *Genus Nervoſum*, it began to raiſe violent pains in the Limbs, alſo in the Loyns and *Abdomen*, ſuch as are uſual in a Rheumatiſm, and in a Scorbutick Cholick.

A worthy man, about forty years of age, robuſt, and ſound, when, upon riding a whole day in the rain, he had gotten cold, by reaſon of the hinder part of his Head being continually wet, ſoon began to feel a pain in that Part, which in a ſhort time being very much encreaſed, miſerably afflicted the Diſeaſed both day and night, and kept him in a manner, always without ſleep. Blooding, Purging, Clyſters, Veſicatories, Hypnoticks; nay, and a great many Remedies of all kinds, diligently adminiſtred by the joint advice of a great many Phyſicians, did little or nothing towards the Cure of this affect: When the Diſeaſe, notwithſtanding all theſe, daily grew worſe, after ſix weeks, Glands, preternaturally ſwoln and painful, aroſe all over the Neck, the *Hemicrania* in the mean while abating nothing: Moreover, the Tendons of the Neck being very much diſtended, and ſtiff, proved very tedious to him; to which in a ſhort time, Convulſive motions, and leapings of the Tendons ſucceeded in various Parts, with a *Delirium*; and at length the Diſeaſed being worn out with pains and watchings, yielded to Death.

As in the foregoing caſes, the Head-aches proceeded from Nodes and tubercles of the Meninges, ſo ſometimes mortal and incurable Head-achs ariſe from a Phlegmon and Abſceſs. A while ſince, a Univerſity Scholar, after he had complained for a fortnight of a very great Head-ach, afflicting him almoſt conſtantly; at length the Fever becoming ſtronger, preſently Watchings, Convulſive motions, and a talking light-headed enſued; at which time a Phyſician being called, Blooding, Clyſters, Playſters, Revulſives, Veſicatories, alſo inward Remedies for withdrawing the courſe of the Blood and Humours from the Head, being carefully adminiſtred, he could do no good, but Death

in a ſhort time followed. The Scull being opened, the Veſſels ſpread over the Meninges were filled with Blood, and very much diſtended, as tho the whole maſs of Blood had flown thither; ſo that the *Sinus*'s being diſſected and opened, above half a pound of Blood flowed forth: Moreover, the Membranes themſelves being affected throughout with a Phlegmonous tumour, appeared diſcoloured: Theſe coverings being taken away, all the *Anfractus* of the Brain, and its Ventricles were full of clear water; and its ſubſtance being too much irrigated, was moiſt throughout, and nothing firm: For the Blood being there heaped together, when it could not circulate, threw off from it ſelf a plenty of *Serum*, by which the whole Head was ſoon floated; ſo that the Diſeaſe, curable haply at the beginning by Phlebotomy, afterward became mortal.

I remember another Univerſity Scholar, who after being conſtantly, and very ſorely afflicted with a *Hemicrania* under the temporal *Suture* for three weeks, fell at laſt into a fatal Apoplexy. The Head being opened, a Phlegmon had grown in the Meninges near the place paining, from which at length ſuppurated and broken, the *Sanies* falling on the Brain, had affected its ſubſtance with a lividneſs and corruption.

But tho a continual Head-ach (eſpecially if it be drawn in length for many weeks without intermiſſion) be not without danger, nevertheleſs we muſt not preſently deſpair of its Cure, becauſe the cauſe of this, how fixed and immovable ſoever it may ſeem, is often cured by a long uſe of Remedies, nay, ſometimes without them, by Time and Nature; tho in a caſe that is almoſt deſperate, there is need of ſome Phyſick, leſt the preſent affect paſs into a worſe, *viz.* into a ſleepy or Convulſive diſtemper. So much of the continual Head-ach; it now remains for us to propoſe ſome Examples, and ſome rare Inſtances of an intermittent Head-ach.

Therefore, not to ſet forth here caſes of the Head-ach, whoſe Fits being erring and uncertain, proceed from the Blood or *Serum* ruſhing into the places affected, in regard that theſe are very frequent, and vulgarly known. I ſhall now ſet before you certain choice Obſervations of this Diſeaſe, being either periodical, or ſeeming to ariſe from ſome one of the *Viſcera*, *per Conſenſum*. As to the former, the periodial invaſions of the Head-ach are produced either from the nutritive Humour, or from the nervous Juice; I ſhall now give you examples of both.

A venerable Matron, in the forty fifth year of her age, being of a thin habit of Body, and a bilous temperament, after having liv'd for a long time obnoxious to Head-achs wont to be occaſionally raiſ'd; about the beginning of Autumn ſhe began to be troubled with a periodical Head-ach: This affect ſeizing her about four a clock in the Afternoon, was wont to hold her almoſt till midnight, till the diſeaſed being

being tired with watchings and tortures, was forced to fall asleep; then after a pretty profound sleep, upon her awaking in the morning she was well. The Diseased having undergone daily Fits of this Disease for three weeks after this manner, delay'd the use of Physick, which she very much abhorr'd; but at length her appetite being dejected, and her strength worn away, she was forc'd to desire a method of Cure, and after a gentle Purge and blooding, she took twice a day, for a week or a fortnight, the quantity of a Chestnut of the following Electuary, and grew perfectly well.

Take Conserve of the Flowers of Cichory and Fumitory, of each three ounces, compound powder of Aron Roots two drams and a half, Ivory a dram and a half, yellow Saunders, Lignum aloes, of each half a dram; Salt of Wormwood a dram and a half, Vitriol of Mars a dram, Syrup of the five Roots what suffices; make an Electuary.

The cause of this periodical Head-ach doubtless was, that the assimilation of the Chyme, or nutritive Humour into Blood was hindred. For when its store received into the mass of Blood could not be overcome, it was wont, after a little stay, to fall at odds, and ferment with its particles: Therefore presently the Blood falling into a turgescency, that it might shake off that incongruous mixture, depos'd its recrements, as on other Parts, so chiefly, and with a greater sence of offence on the Fibres of the Meninges, being before weak, or injur'd in their conformation, so that the pain lasted till the heterogeneous particles, boyling by their mutual congress, either were subdued, or did exhale

A handsome, tall, and slender Woman, long and sorely obnoxious to cephalick affects, was wont to be infested sometimes for many days, nay weeks, with a violent Head-ach, which seiz'd her daily at her awake early in the morning, and afflicted her for three or four hours: In the mean space she was also affected with a heavinesse of the whole Head, a deadness of the Senses, and a stupidity of Mind: which affects vanishing together with the pain before Noon, like Clouds dispersi, left all things calm and serene: Till the next morning they possest again the Brain like a fogg and dark mist: For curing these distempers, I prescribed purging Pills, a spare Bleeding, Vesicatories also, and the use of Spirit of Harts-horn, or of Soot, with Cephalick Juleps, or Waters.

In this Gentlewoman the pains of the Head rather followed sleep than was cur'd by it; because in this morning Head-ach the morbifick matter resided in the nervous Juice, whose greatest crudity, and aggravation about the Head, happen presently after sleep; but the other evening fit of this disease, in regard it depended on the plenitude and turgescency of the nutritive liquor within the mass of Blood, therefore hapned so many hours after dinner, and was not mittigated but after sleep, which appeases the disorders of the Blood.

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Tho the Experience and Complaints of ſick Perſons manifeſtly ſhew that Fits of the Head-ach ſometimes ariſe by conſent from the other Parts, *viz.* the Womb, Spleen, Stomach, *&c.* Nevertheleſs it as clearly appears from the accounts of them, and the Phœnomena being duely conſidered, that this is done by another means than by Vapours rais'd from the Viſcera affected to the Head. And firſt, as to the pains of the Head ſeeming to be rais'd from the Womb, nothing occurs more frequently than for violent Head-achs to enſue upon the ſuppreſſion of the *menſes* or *lochia*: moreover, tho the *menſes* obſerve their due courſe, yet ſome Women are wont to be afflicted with a violent pain of the Head juſt as they are coming, others as ſoon as they are paſt: But yet, tho at the ſame time that the Head is affected, the Womb is alſo, yet it does not follow that the Injury is convey'd immediately from this to that: but it is the Blood it ſelf which fixes the morbifick matter on the Head; *viz.* it ſometimes perverſly conveys it, being engendred within its own boſom, and deſign'd for the Womb, into the Meninges of the Brain: and ſometimes withdrawing it from the Parts of the Womb, it delivers it to the Head with a greater miſchief. This Ætiology agrees alſo with the Head-ach, vulgarly imputed to the Stomach, Spleen, and other Parts.

A beautiful young Woman, of a thin habit of Body, and a hot Blood, having been obnoxious to an hereditary Head-ach, was wont to undergo frequent Fits of it, and thoſe coming at random, to wit, ſome happening on a light occaſion, and others ariſing of their own accord, that is, without any evident cauſe. On the day before the ſpontaneous acceſs of the Diſeaſe, being very hungry in the Evening, ſhe greedily eat a plentiful Supper, with a hunger-ſtarv'd, not to ſay Canine appetite, moſt certainly fore-knowing by this ſign that a pain of the Head would ſeize her next morning, which ſign never fail'd of Event; for as ſoon as ſhe awak'd, being afflicted with a moſt cruel torture throughout the Sinciput, ſhe was affected likewiſe with a vomiting of a humour, ſometimes acid, and as it were vitriolick, ſometimes bilous, and extremely bitter; it hence ſeeming to appear that that Head-ach had its riſe from the fault of the Stomach.

To undertake to give the reaſon of this, in the firſt place it is known that a vomiting enſues upon the Head's being injur'd, *viz.* after a ſtroak, Wound, or a fall from an high place; nevertheleſs, a pain of the Head ſeldom or never follows a vomiting, Cardialgia, or the Stomachs being otherwiſe troubled, unleſs an effervescency of the Blood happens. Wherefore, in the foreſaid caſe of the Perſon diſeas'd, ſince it plainly appear'd that the Meninges of the Brain were prediſpos'd for Head-aches, and that its Fits had raiſed an agitation of the Blood; hence it will be obvious to conceive, when the heterogeneous Particles by reaſon of the fault of Chylification, were heap'd together in the maſs of Blood to a fulneſs, preſently upon its beginning to flow in order

order to the expulsion of that which was offensive, they being severed from the blood, as disagreeing with it, and partly being sent from the Arteries into the Ventricle, stirr'd up its ferment, and so produc'd hunger, and partly rush'd into the prediſpos'd Meninges of the Brain, and there depos'd the fuel, or rather incentive of the Head-ach which was presently to ensue. This Patient loathing all Medicines, and refusing to undergo any method of Cure, became at length also obnoxious to paralitical and convulsive affects. From what is said it will be easie to give the Ætiology of any other Head-ach; *viz.* hypochondriacal, hepatical, or otherwise sympithical, so that it will not be needful to add here more Hystories or Observations.

CHAP. II.

Instructions and Prescripts for curing the Lethargy.

HItherto we have described with what Disease chiefly, and how diversly the precincts of the Head, or the Coverings of the Brain are wont to be affected: Now, descending to its inward Parts, and to its cortical Substance, which immediately lyes under those Coverings, let us see to what affects chiefly this Part is found to be obnoxious. We have shewn elsewhere that the Cortex of the Brain is the Seat of Memory, and the Entry of Sleep; wherefore we justly ascribe to the cortical part of the Brain that Disease which is wont to cause an excess of Sleep, and a defect, or eclipse of the Memory, to wit, the Lethargy.

The word Lethargy is wont to signifie two kinds of affects, which are only the act and disposition of this Disease; for those that are said to be troubled with a Lethargy, either altogether keeping their Beds, through a very great Invasion of it, are so far overwhelm'd with Sleep, that they are scarce able to be rais'd by any impression of a sensible Object: nay, and if haply they open their Eyes, or raise their Limbs upon pricking, or a smart stroak, presently becoming insensible again, they sink down, and often, when they are left to themselves, falling into a perpetual Sleep they dye out right: which kind of Fit has very often a Fever joyn'd with it, though when the diseased awake, and come perfectly to themselves, for the most part it ceases of its own accord. Or secondly, those are accounted for Lethargical, who being oppress with an immoderate deadness of the Senses, are in a manner always

always prone to ſleep: ſo that in walking, nay whilſt they are eating or doing any other thing, they now and then fall into a dead Sleep: and ſince there are divers degrees of this Sleepineſs, and various manners of affecting, hence alſo there are made many Species of the Lethargick Diſpoſition. at preſent we ſhall ſpeak of the former Lethargy, and ſo properly called, and afterward of the continual Sleepineſs, alſo of the Coma, Carus, and other ſleepy affects allyed to them: and likewiſe of continual Watching.

Mean while you may obſerve, that almoſt in every kind of Lethargy, a Drowſineſs or Sleepineſs, and Forgetfulneſs are always preſent, as Pathognomick Signs, and equally attend it. Wherefore, that the formal Nature and Cauſes of the Lethargy may the better be known, We muſt firſt enquire here concerning Sleep and Oblivion, what they are, and for what cauſes they are rais'd.

The Eſſence of Sleep conſiſts in this, that the corporeal Soul withdrawing it ſelf a little, and contracting the Sphere of its Irradiation, in the firſt place renders deſtitute the outward part of the Brain or its Cortex, and then all the outward Organs of Senſe and Motion of the Emanation of the Spirits, and cloſes the Doors as it were; ſo that they being called in for refreſhment ſake, lye down, and indulge themſelves to reſt: mean while the pores and paſſages of the outward part of the Brain being free, and void of the Excurſions of the Spirits afford a paſſage to the Nervous Liquor diſtilled from the Blood for new Stores of Spirits. In natural and uſuall Sleep, theſe two concauſes conſpire and happen together as it were by ſome mutual compact of Nature: *viz.* at the ſame time the Spirits recede, and that nervous Humour enters: but in nonnatural, or extraordinary Sleep, ſometimes this cauſe, ſometimes that is firſt: for either the Spirits being weary or called away withdraw themſelves firſt, and afford an entrance to the Nervous humour heaped together in a readineſs for it: or a plenty of Nervous humour coming to thoſe Places, and making a way by force as it were, repells the Spirits, and entring their Paſſages, floats them as it were. Concerning Oblivion, or the Eclips or defect of Memory, the cauſe of this is wholly the ſame as of immoderate Sleep, *viz.* an Excluſion of the animal Spirits from the paſſages of the outward part of the Brain, which are filled with ſome Humour, and their return prohibited for a time.

Preternatural Sleep or inſatiable Sleepineſs (which is the chief Symptom in the Lethargy and in the ſleepy Effects) ſeems to ariſe wholly from the ſame cauſes as non-natural Sleep, rais'd to a greater Energy, *viz.* either the animal Spirits being firſt affected leave the outward part of the Brain, and yeild an entrance not only to the Nervous, but likewiſe to the Serous, or otherwiſe vitious Humour, or the ſerous and excrementitious Humours together with the Nervous force open the cortical Gates of the Brain, and floating as it were its Pores and Paſſages, repell,

repell and drive away the Spirits thence: ſometimes this Cauſe, ſometimes that is the firſt and chief, and ſometimes both happen together.

Therefore the conjunct Cauſes of the Lethargy are, 1. a heaping together of a redundant or incongruous Humour within the Pores of the cortical part of the Brain; which depends on other, both procatarctick and evident cauſes: As to the former, both the Blood uſes to be in fault, in that it ſends morbifick matter to the Part affected, and the Brain it ſelf, in that it admits it too eaſily. The evident cauſes which joyn with theſe are chiefly, Over-eating, Drunkenneſs, and eſpecially immoderate drinking of Wine and hot Waters, then upon ſuch an Exceſs to ſit up all night, or to ſleep in the open Air: Moreover, a long ſuppreſſion of an uſual evacuation of Serum by other ways; Alſo if Spaw-waters, drank in a large quantity, are not preſently diſcharg'd again by Urine, they threaten a Lethargy; the ſame alſo is cauſed by the recrements of other Diſeaſes, coming to an ill or no Criſis, conveyd to the Head: ſo that a Lethargy happens upon acute, or long continued Fevers, and other Cronick Diſeaſes, and very often upon a Head-ach, Frenſie, Empyema, and Cholick.

2. In regard, as non-natural, ſo ſometimes preternatural ſleep begins from the Spirits being firſt dejected; therefore the other Conjunct cauſe of the Lethargy conſiſts in a ſtupefaction inflicted on the Spirits, which proceeds either from Opiats taken inwardly, or from narcotick particles engendred in the Body.

The ſum of what is ſaid concerning the Lethargy, is this, that the animal Spirits reſiding in the outward part of the Brain being ſtop'd from their wonted motion and emanation, yield to a profound and inſatiable Sleep; Now they are ſtop'd either through their own fault, in as much as being ſpent, or affected with a ſtupefactive force, they are congeal'd as it were; or becauſe their Paths or tracts are obſtructed in the outward part of the Brain, and are poſſeſs'd by a ſtrange gueſt, ſo that they have not a ſpace granted them fit for their expanſion.

The chief Symptoms of this Diſeaſe, are Sleep and Forgetfulneſs; a ceſſation of every other knowing, or ſpontaneous function, an uneven and ſlow reſpiration, a Fever, and often the affect growing worſe, Cramps, leapings of the Tendons, and laſtly, univerſal and mortal Convulſions.

The prognoſtick of the Lethargy is included in very narrow bounds; for the Fit of the Diſeaſe being for the moſt part acute, is ſoon terminated in Death, or a Recovery, and moſt commonly is wont to give more cauſe of fear than hope.

If it happens upon a Fever that is malignant, or of a difficult determination, or if upon other cephalick or convulſive Diſeaſes, as the Head-ach, Frenſy, Mania, Epilepſy, or alſo if on a long continued or

ſevere Cholick or Gout, the Phyſician can prognoſtick nothing but ill, nor is it leſs to be fear'd, if it happens in a cacochymical Body, or in one long ſubject to ſickneſs, and in old age.

In like manner, it is an ill Omen, if the Diſeas'd being preſently overwhelm'd with a great deadneſs, and becoming almoſt Apoplectical, cannot be awak'd, if he breaths unevenly and ſlowly, or with great ſnoarings: Moreover, if the Diſeaſe growing worſe and worſe, the ſick Perſon be affected with Tremblings, Cramps, leapings of the Tendons, and laſtly, with convulſive motions, he is to be look'd upon as in a deſperate condition.

But if the affect without any great Procatarxis, be rais'd by an evident Cauſe alone, as from over-eating, drunkenneſs, the uſe of Narcoticks, or from a ſtroak or wound of the Head that are not very dangerous, we may expect a leſs fatal event. Moreover, if the affect ariſing on ſuch an occaſion, happens to a Body which was ſound and robuſt before, if at the firſt invaſion it does not wholly take away the Senſe and Memory, and after a little time the ſymptoms begin to remit, we may not deſpair of ſuch a ſick Perſon.

In any Lethargy, if the cauſe of the Diſeaſe ſeems ſomewhat to be ſhaken and mov'd, ſo as plentiful and laudable evacuations by Sweat, Urine, or Seige happen by the help of Medicines, or by the inſtinct of Nature, and give eaſe; if upon the application of Veſicatories, a great glut of filthy Waters flows forth; if inflamed ſwellings, or great puſhes ariſe behind the Ears, or in the Neck; if a great ſneezing with a dropping at the Eyes or Noſe ſhall happen, we may thence conceive ſome hope of recovery. And ſometimes an *Empyema* hapning upon a Lethargy, puts an end to it, *viz.* inaſmuch as the morbifick matter which was fix'd in the Head, and firſt caus'd the Lethargy, being afterward drank up again by the Blood, and depos'd in the Breaſt, produces the *Empyema*: In the deſcription of the Epidemical ſleepy Fever, which reign'd *An.* 1661. we have obſerved that this hapned to many.

Concerning the Cure of this Diſeaſe, ſince it allows no truce, we muſt not be long deliberating: After the injection of a ſmart Clyſter, preſently let a Vein be open'd; for the Veſſels being emptied of Blood, more readily drink up again the *Serum*, or other humours depos'd in the Brain: Moreover, I adviſe in this caſe the Jugular Vein to be open'd, rather than a Vein of the Arm, becauſe by this means the Blood very much heap'd together, and haply ſtagnating within the *Sinus*'s of the Head, will be more eaſily reduc'd to an even circulation.

After Bleeding, other Remedies of every kind are preſently to be applied to uſe; let large *Veſicatories* be applied to the Neck and Legs; the Face and Temples are to be anointed with *Oyl of Amber, or Cephalick Balſams*; let *Cataplaſms of Rue, Pepperwort, or Crowfoot*, well pounded

pounded together with black Soap and Sea-Salt be applyed all over the Feet, let ſmart *frictions* be us'd to the Limbs, let *Salt of Urine, or Spirit of Sal Armoniack* be frequently held to the Noſtrils.

In the mean while let Cephalick Remedies be now and then taken.

Take Water of Peony Flowers, Black Cherries, Rue, Walnuts ſimple, of each three ounces, compound Peony Water two ounces, Caſtoreum tyed in a Nodulus and hung in the Glaſs, two drams, Sugar three drams, mix them, make a Julep; let four or five ſpoonfuls be taken every third or fourth hour; moreover, to each doſe of this add from twelve to fifteen drops of Spirit of Harts-horn, Amber, or Sal Armoniack, or a paper of the following Powder.

Take Powder of Male Peony Roots, Mans Scull, Roots of Virginia Serpentary, Contrayerva, of each a dram; Bezoar, Pearl, of each half a dram; Coral prepar'd a dram, make a Powder, divide it into twelve parts.

Moreover, it is here to be conſidered, whether a purging by Vomit or Seige ought not to be ordered juſt at the beginning. I know that this is variouſly controverted amongſt Authors, and I have known it us'd in practice with a various ſucceſs: which being conſidered, and compared betwixt themſelves, I ſhall briefly declare what is my opinion.

If a Lethargy has aroſe from a freſh over-eating, or being drunk, or if from taking improper and narcotick things, preſently let a vomit be raiſed: Wherefore, let *Salt of Vitriol* be given, with *Wine and oximel of Squils*; or in robuſt Perſons, *an infuſion of Crocus Metallorum, or Mercurius Vitæ, with Black-Cherry Water:* and afterward, unleſs it works of its own accord, let a Vomit be provoked, by thruſting a Quill into the Throat.

But if the invaſion of the Diſeaſe happens upon a Feaver, or other Cephalick affects; or if it be raiſed primarily, or *per ſe*, by reaſon of a Procatarxis firſt laid in the Blood, or in the Brain, Vomits and Purges given preſently at the beginning, whilſt the matter is flowing, are wont oftner to do more hurt than good: to wit, inaſmuch as whilſt the humours are in motion, thoſe Medicines more exagitate them; and ſince they are not yet able to ſubdue them, and lead them forth, they drive them into the part affected.

On the ſecond day, if the dead ſleepineſs be not yet remitted, let bleeding, in caſe the Pulſe indicates it, be repeated, or in its ſtead let Blood be taken away in the Shoulder-blades by Cupping-glaſſes after Scarification: Then a little afterward let an Emetick Medicine (if nothing prohibits it) or a Cathartick, be given.

Take Sulphur of Antimony five grains, Scammony ſulphurated eight grains, Cream of Tartar ſix grains; mix them, make a Powder, let it be given in a ſpoonful of the Julep preſcribed.

Or, Take Scammony ſulphurated twelve grains, Cream of Tartar fifteen grains, Caſtoreum three grains, make a Powder: give it after the ſame manner: Mean while let the ſame, or the like altering or deriving Remedies be ſtill continued.

On the third day, and afterward, thoſe things which at the beginning of the Diſeaſe were forbidden for fear of a new fluxion, viz. *Errhines*, *Sneezers*, and *Apophlegmatiſms* ought to be us'd. Moreover, then it will be ſometimes profitable to apply the warm Viſcera of a freſh kill'd Animal to the Sinciput, after that the Hair is ſhav'd or cut, and now and then to change it; and ſometimes alſo to foment thoſe places with a cephalick and diſcuſſing Decoction: But beyond other Topicks, I have known great relief given by a large Veſicatory, raiſing Sores that ran very much all over the Head: I ſaw two Lethargical Perſons cured chiefly by this Remedy, after that the Diſeaſe was protracted in length, and therein having loſt not only the memory, but even all knowledge: for in both, the excoriated places, in regard they could not eaſily be covered with an Eſchar, diſcharg'd a vaſt quantity of a thin Ichor, to wit, daily about half a pound. It will not be needful for us to deſcribe or ſet down other Medicines of this kind, they being vulgarly and every where to be found, what remains, for the illuſtrating of what is ſaid before, I ſhall give you ſome Hiſtories of ſick Perſons.

A Husbandman about thirty years of age, of a phlegmatick temperament, inclining to a ſanguine, being long obnoxious to frequent Headaches, about the beginning of Winter became very ſleepy and drowſy; afterward, on a certain day when he was tilling a field, he laid himſelf on the ground, and fell into a profound Sleep; and when he could not be awak'd by a Servant, and other Perſons call'd, being carried home he was put to bed: his Friends in the mean while expecting that the Sleep being at length ended, he would awake of his own accord. After the ſpace of twenty four hours was paſt, when they were not able to awake him by pinching, pricking, making a noiſe, and other wayes, they call me; when I came, I applied a large Veſicatory preſently to all the hinder part of his Neck, then Blood being drawn to ſixteen ounces, I ordered a ſmart Clyſter to be given, his Face and Temples to be anointed with Oyl of Amber, Frictions, and painful Ligatures to be uſed to his Legs: Moreover, I preſcribed Spirit of Soot to be taken often in a day with a cephalick Julep: notwithſtanding he lay ſtupid all that day, without any ſenſe, if, being irritated by hard pinching, he raiſed himſelf a little, and opened his Eyes, preſently falling down and cloſing them, he yielded again to his Lethargy. About the Evening I ordered Cupping-glaſſes with much flame to be applied to his Shoulder-blades, which being done, he began to become a little awake; and as about that time he purg'd freely by Seige, and the Plaiſters being taken off, a great deal of Serum flowed from the

the little bladders, we had thence a great hope of his Recovery. Therefore Remedies being frequently uſed afterward that night, awaking the morning following, he knew his Friends, and anſwered well to what was askt him: but the whole cloud did not yet vaniſh, for he continued ſleepy and forgetful for many dayes, till being twice purg'd he perfectly recovered.

An *Oxford Gardener*, ſick of a putrid Fever, and about the height of the Diſeaſe, inſtead of a Criſis falling into a Lethargy, was overwhelmed with a drowſie evil for three or four Dayes afterward, that he could not be ſo rouſed from his Sleep by the uſe of any Remedy, as to become perfectly awake: but at length, when his Head being ſhaved, and Veſicatories being applied almoſt all over it, had raiſed a great many Sores that flowed plentifully, awaking from his Sleep, he recovered ſome ſort of Senſe: nevertheleſs his Memory being almoſt wholly aboliſht, he was ſo ſtupid, that remembring no ones Name, or Words, he had ſcarce more apprehenſion than a Brute. When he had lain after this manner for almoſt two Months void of Underſtanding, and full of Sleep, the cloud began by degrees to be diſperſt; and he at length returning to his wonted Labours became indifferently well, though he never got again the ſame Vigour of Mind, and former quickneſs of Sence, which he enjoyed before the Diſeaſe.

As for a Lethargy ariſing from the uſe of Opiats, I remember I formerly obſerv'd a good exact type of it in a Country Village, in which I was forc'd to ſtay a night, my Journey being ſtopt by reaſon of bad Weather: For as I was juſt a going to bed, my Hoſt intreated me that I would go and ſee two poor People in the Neighbourhood, who were affected after ſuch a ſtrange and miſerable manner; which Office being induc'd to perform, not only through Charity but alſo Curioſity, I was willingly led to a very ſmall and low Cottage, where I found an aged Father and his Daughter (in two little Beds plac'd here and there in the ſame Cell) overwhelm'd with a moſt profound Sleep, which had oppreſs'd them the day before, after they had eaten Henbane-roots, then freſhly dugg up in their little Garden, which they miſtook for Parſneps.

To both theſe, after a Vomiting plentifully rais'd by pouring *Oyle and Oximel* into their Mouths; and thruſting a Feather into their Throats, I preſcribed *tincture of Caſtoreum* to be given frequently during the whole Night in a Spoonful of *Treackle-Water* (which Remedies I then caſually had by me); moreover that their *Temples and Noſtrils* ſhould be anointed with the ſame Tincture, and if it could be done, that a ſmart *Cliſter* ſhould be injected: the day following, firſt the old man, and afterward the Daughter, awaking, came to themſelves, the dead ſleep being wholly ſhaken off, in theſe Perſons, after the remainder of the Narcotick being caſt up by Vomit, leſt it did farther miſcheif, it was only needful that the

the Spirits being raiſed up by fit Remedies (in the number of which *Caſtoreum* is juſtly accounted againſt the Poyſons of *Opiats*) they ſhould be freed from the Stupefaction inflicted on them.

CHAP. III.

Inſtructions and Preſcripts for curing certain other ſleepy affects, viz. *the continual Sleepineſs, the Coma, and the Carus.*

TO begin with the firſt; many Authors call this not a Diſeaſe, but a drowſie Diſpoſition; for the affected as to other things are well enough, they eat and drink well, they walk abroad, they take care indifferently of their houſhold Affairs, but in ſpeaking, or walking, or eating, nay their Mouths being full of Meat, they now and then nod, and unleſs they are ſtirred by others, they are preſently overwhelmed with Sleep: and after this manner they Sleep almoſt a continual Sleep, not only for ſome Dayes or Months, but for many years (as it is reported of *Epimenides.*) Wherefore we judge this Affect by which we are defrauded of more than half of our Life, to be really a Diſeaſe and to deſerve a cure.

The ſeat of ſleepineſs, as of the Lethargy, is to be plac'd in the outward part of the Brain, but with this difference, that the material or conjunct cauſe of this Diſeaſe, tho always preſſing at the entrances of the Brain, does not penetrate ſo deep as it is wont to do in the Lethargy; but affects in a manner only the ſurface of the Brain, or the meer cortical ſubſtances of the *Anfractus*, the medullary part within being as it were untouched; in which regard it differs not only from the Lethargy, but alſo from the *Coma*, for in the affect which we deſcribe, tho Sleep be continually preſſing, yet it is eaſily broken off: and moreover being perfectly awak'd the diſeaſed remember a great many things, diſcourſe with their Friends, being preſently ready to fall again into their ſleepineſs: whence it appears that the cauſe of the Diſeaſe ſticks only in the outward border of the Brain, nor does it enter deeply its ſubſtance, as in other ſleepy affects.

This affect, as I have obſerved in many, is not very dangerous; for either (as it is often done) it is perfectly cured, or at leaſtwiſe continuing for many years, without a Carus or Apoplexy (which are wont to be feared) it does not preſently become mortal or terrible: the releaſe of this affect often happens upon the change of the ſeat of the

Diſ-

Diſeaſe: to wit, the Brain becoming clear, the morbifick matter is conveyed to the Cerebellum, where lying, it produces Tremblings of the Heart, the Aſthma, Faintings of the Spirits, and other troubleſome Symptoms accounted for Hypochondriacal.

The Therapeutick method ſuggeſts chiefly theſe intentions, *viz.* that after a proviſion being made for the whole by bleeding (if it be proper) and by purging, theſe Remedies may be afterward carefully given, with which the Blood and Brain may be freed from their watery filth, and the later may be corroborated, that it may not for the future receive and retain ſerous Superfluities. For theſe ends let the *Pilulæ de Succino*, or *Cochiæ*, be given with *Roſin of Jalap* once or twice a Week: at other times going to bed, and early in the Morning, let a doſe of a *Cephalick Electuary*, or of the *Spirit, or Tincture of Sal Armoniack, Amber, Soot* be daily taken, with a *Cephalick Julep*. The Forms of which may be choſen from thoſe before written: At eight a Clock in the Morning, and at five in the Afternoon, let a draught of *Coffee* be taken, firſt boyling in the Liquour of which it is prepar'd, Leaves of *Sage or Roſemary*, till it acquires a green Tincture: for ordinary Drink let a *Decoction* of *Guaiacum* be taken, adding about the end, Leaves of *Sage, Betony, and other Cephalicks*. Moreover it will be profitable to make two large Iſſues betwixt the Shoulder blades, and likewiſe frequently to apply Veſicatories about the Neck; the Hair of the Head being cut off, let a little *Cap of Cephalicks and Aromaticks* be worn. Let a Veſſel filled with *Salt of Urine, or Spirit of Sal Armoniack* be now and then held to the *Noſtrils*. Moreover an exact form of dyet being ordered, let ſome Servants, attending the Diſeaſed, not only ſtir him up now and then as he falls aſleep, but keep him waking daily for ſome ſet Hours.

A certain Gentleman, of a ſanguine temperament, and, whilſt he was young, of an acute and ſubtle underſtanding; afterward, in his declining age, being given to Idleneſs and Drunkenneſs, became dull and torpid, and likewiſe Hydropical with a great Paunch, and ſwellings of the Thighs and Leggs: but from theſe Diſeaſes (into which he frequently fell) if at any time he abſtained for ſome while from his drinking, and applyed himſelf to Phyſick, he both often and ſoon recovered: but at length tho free from his Dropſy, he was oppreſt with ſo great and almoſt perpetual Sleep, that he would be ſleeping in all places, and doing any thing; moreover, being awak'd by his Servants or Friends, he was wont to be preſent enough to himſelf, and to diſcourſe well enough for ſome Minutes of an Hour, of things propoſed, falling preſently again into his Sleep: To this Perſon, after many Medicines tryed almoſt to no purpoſe, I preſcribed at length that he ſhould take every Morning and Evening a Spoonful of the *Powder of the Leaves of Betony dried in the Summer Sun, and kept in a Glaſs, in a little Draught of Water diſtilled from the Flowers of Lavender*: by which Remedy receiving eaſe within a few days, he was perfectly cured within a Months ſpace, and enjoyed an entire Health for four years from that time. Afterward

terward when by reaſon of an ill courſe of Diet the ſame evils returned, he repeated the ſame Remedy, tho not with ſo great ſucceſs. But beſides there being need alſo of other Medicines, he took ſometimes *Spirit of Harts-horn or of Soot, with an appropriate Julep*; ſometimes *Electuaries of Cephalick Conſerves and Powders, adding ſometimes Steel.* As often as he would indulge himſelf to his wonted genius of drinking, inſtead of Wine or Beer, he drank Coffee: moreover for his ordinary drink, he had ſometimes *Ale with the Leaves of Scurvy-graſs, Sage and Aromaticks infuſed in it*, ſometimes *a Decoction made phyſical with Woods, Spices and Cephalick Herbs*, for many years. Afterward, being in a Manner always intemperate and cacochymical, yet he lived free from the Lethargy; at length a Cachexia ſeizing his Breaſt, being caſt down by degrees by a Cough with an Aſthma, he dyed.

The next ſleepy affect, *viz.* ſomewhat greater than the former, and leſs than the Lethargy, is that which is vulgarly called the ſleepy *Coma*: thoſe that are obnoxious to this, for the moſt part are oppreſt with a great ſleepineſs, to which in a manner always giving themſelves over, they lye with the mouth open, and the lower Jaw fallen, more like to Perſons dead than living: being ſtirr'd up by hard pinching or pricking, they look about them, ſpeak to the ſtanders by, anſwer to things askt, but preſently ſleeping again, they ſeem very much troubled to be hindred or diſturbed from Sleep, thus pleaſingly ſtealing upon them: and being indiſpos'd after this manner, they continue in a ſleepineſs for many dayes, nay, and ſometimes Months, without a Fever accompanying it, or following it, or an injur'd reſpiration, and being eaſie to be awak'd, and not very forgetful, in which things they differ from Lethargical Perſons: mean while they differ no leſs from others troubled with the affect even now deſcribed: for as much as thoſe that have the *Coma*, keeping for the moſt part to their Bed, or a Chair, do not walk abroad, or take care of domeſtical Concerns, as the others. They anſwer appoſitely to ſome ſhort Queſtions, but are not able to hold a Diſcourſe, or deliberate of things to be done.

The cauſe of this doubtleſs is of the ſame kind as of the former Diſeaſes, but of a middle degree betwixt both before deſcribed. For we may conjecture that in this affect the morbifick matter penetrates the Brain a little farther than in the continual Sleepineſs, *viz.* that it invades the outward parts of the *Anfractus* or *Gyri*, together with the leſſer Branches of the *Medulla* incloſed: but that it does not reach to the greater *Sinus*'s of the *Medulla* joyning to the *Corpus Calloſum*, and which are wont to be poſſeſt in the Lethargy.

The *Coma* ſometimes beginning primarily and of it ſelf, as the Lethargy, either proceeds from a ſerous filth diſcharged from the Blood on the *Cortex* of the Brain, or from a ſtupefaction inflicted on the Spirits there reſiding: and then this affect, by how much leſs it is than the Lethargy, by ſo much is it accounted leſs dangerous. but more commonly this

this Diſeaſe enſues upon other Cronick or acute diſtempers, *viz.* the Head-ach, Convulſions, and moſt frequently upon Fevers of an ill criſis, eſpecially in Children, old, and phlegmatick people. Some years ſince, in an Epidemick Fever, hapning through the affect of the Nerves (which we have elſewhere deſcrib'd) as I obſerved ſome to be Lethargical, ſo many to be troubled with the *Coma*: of whom a great many recover'd, the morbifick matter being conveyed from the Head into the Breaſt: Moreover, in other caſes this affect being of a doubtful event, betwixt hope and fear, requires the ſedulous care of a prudent Phyſician.

In a *Primary Coma* the Therapeutick method ſuggeſts to us the like, and in a manner the ſame intentions of healing as in the Lethargy: As to the morbifick matter, we muſt endeavour, both that its new afflux to the Brain, and that which is already ſticking in it, be diſcuſs'd, or drawn away: Moreover, the Animal Spirits ought to be raiſed up, and all drowſineſs or ſtupefaction ought to be ſhaken off from them. For this end we muſt order *Purging, Blooding, Cupping-glaſſes, Veſicatories, Revulſing and diſcuſſing Topicks, give Cephalick Medicines,* and eſpecially ſuch as are endowed with *a Volatile Salt,* and uſe many other ways of adminiſtrations before-mentioned.

But if this Diſeaſe enſuing upon other affects, happens to any Perſon whoſe Body is much worn away, the Blood vitiated, or greatly depauperated, we muſt ſeriouſly deliberate concerning letting Blood; and Purging before we order them, nay, and for the moſt part we muſt abſtain from them: tho ſometimes, that the conjunct cauſe of the Diſeaſe, or the matter ſticking in the Brain may be put in motion, it may be convenient to draw Blood in a ſmall quantity from the Forehead, or from the Temples by Leeches, or from the Shoulder-blades by Cupping glaſſes, with a Scarification: *Veſicatories* have a chief place here, not only to be applied to the Neck or Head, but to the Legs and Arms, and to other parts of the Body by turns. Moreover, let *Spirit of Harts-horn, of Soot, or of Sal Armoniack, impregnated with Amber, Mans Scull, Coral, and other Cephalick things be frequently given, with an appropriated Julep, or other Liquor.* Forms of theſe, and of other Medicines uſual in theſe caſes, together with ſtories of ſick Perſons, and examples of their Cures, are to be found in the deſcription of the foreſaid *ſleepy Fever*; ſo that I need not here again inculcate the ſame, or the like.

There remains yet another ſleepy affect, or kind of the Lethargy, vulgarly called a *Carus*, which being greater than the Lethargy, and ſomewhat leſs than the Apoplexy, is ſo allyed to this, that it often paſſes into it, but is wont to be diſtinguiſhed from both: for thoſe that have the *Carus* for the moſt part breath well, if at any time they are hard pinched, they move their members, ſometimes raiſe up themſelves, open their Eyes, and often ſpeak, which Apo-

plectical Persons do not do; but the same, tho stirred or rouſed up, scarce understand, or plainly discern any thing, in which respect they are distinguished from those that have the Lethargy.

From what is said it seems to be manifest, that the conjunct cause, or morbifick matter of the *Carus*, penetrates somewhat more deep toward the middle of the Brain, and to have its seat at least in the outward border of the *Corpus callosum*; and sometimes, as that matter gradually advances from one part to another, the Diseases before-mentioned successively arise, and each last is only the encrease of the other.

But sometimes the morbifick cause, without a gradual progress through those Parts, at the first assault affects the middle part of the Brain, and there (as it sticks shallower or deeper) causes a *Carus*, or Apoplexy. In which case it must not be thought that the whole circumference of the *Corpus Callosum*, as also of the cortical part of the Brain is possest by the soporiferous matter; for it suffices, that rushing into any one place, it has seized some part of the middle, for thereupon presently in all that Region follows an eclipse, or at least a prosternation of the Spirits.

The *Prognostick* of a *Carus* for the most part is ill, especially if the Disease happens upon a malignant or long continued, or a slow Fever not determined, or on that which happens in Childbirth: Nor is less danger threatned, if it succeeds other Cephalick Diseases, or is rais'd by reason of a wound in the Head; though in these cases sometimes there is a Cure.

The event of this Disease either for death or recovery is wont to be various: The *Carus* often passes into an *Apoplexy*, which soon kills; so that after the loss first of the animadversive faculty, in a while a deprivation of sense and motion, and then by reason of the taint convey'd to the *Cerebellum*, alterations of the Pulse and Respiration, and in a short time Death it self follows.

But sometimes the morbifick matter sinking deeper, and falling from the *Corpus Callosum* into the *Corpus Striatum*, one, or both together, the Brain becomes a little clear; so that the Diseas'd look about them, speak and know things; nevertheless, in the whole Body besides, the Palsey, or *Hemiplegia* ensues: Neither are thus things in safety, as to Life; for often when the Brain begins to be restor'd, the *Cerebellum* is worse; so that thereupon the Spirits which execute the offices of the Vital, and meer Natural function being there ill affected, either Convulsions in the *Viscera* and *Præcordia*, or mortal lettings of the Pulse and respiration are caus'd: tho sometimes when the morbifick matter is neither too redundant, nor too malignant, it is partly drank up again into the Blood, and partly discuss'd, so that the Diseased perfectly recover.

The Therapeutick method suggests the same intentions of Healing, and indicates altogether the same Remedies, which are wont to be used

uſed in the *Apoplexy*: Wherefore it will not be needful to ſet down here Claſſes of Indications, or to heap together a mighty maſs of Medicines, but that which ſeems more to the purpoſe: I ſhall here propoſe a ſtory or two of Perſons diſeaſed, whereof I have a great many ready to relate.

A worthy man, about forty years of age, having loſt his health through intemperance, when he had begun to uſe I know not what Remedies, preſcribed by an Empirick, fell into a *Carus*; haply becauſe the morbifick matter being ſtirr'd, and agitated by the Medicine, ruſh'd into the Brain. Going to ſee him the ſecond day, I found him buried in a profound ſleep, and almoſt inſenſible; for tho upon hard pinching or pricking he opened his Eyes, and mov'd his Limbs, yet preſently falling aſleep again, he perceiv'd nothing at all of what he did, or endur'd. In this caſe, tho declaring a ſad Prognoſtick, however I did not forbear to uſe Phyſical means; abſtaining from Phlebotomy, by reaſon of his ſtrength being much ſpent, and his Blood depauperated, I preſently ordered a large *Veſicatory* to be applied to his Neck, and a ſmart *Clyſter* to be given him, of a decoction of *Briony Roots, with Carminative Flowers and Seeds, adding likewiſe two drams of the ſpecies of Hiera*: His *Temples* and *Noſtrils* were anointed with *Balſams*: *Cataplaſms of Rue and Briony Roots* were applied all over his Feet: Moreover, every other or third hour I gave him a doſe of *Spirit of Harts-horn, with a Cephalick Julep*; and many other adminiſtrations, uſual in this caſe, were carefully put in practice. To which nevertheleſs the Diſeaſe not at all yielding, the day following I preſcrib'd him a *Purge of Scammony prepar'd*, to be taken in a ſpoonful of Broth: After which, when he had frequently and freely Purg'd, he began to open his Eyes, to ſpeak, and to know ſtanders by, and a little after, coming to himſelf, he fully awaked. This Diſeaſe (as I gheſs) was therefore cur'd more eaſily, and ſooner than was hop'd, becauſe that cloud ſent haply into the Brain by a Medicine, could the better be drawn thence by the help of another Medicine.

A renowned man, fifty years of age, of a groſs Body, and formerly obnoxious to a Vertigo, and aſthmatick affects, had lived very ſound for two years, having uſed Phyſick Spring and Fall, and having a large Iſſue near both Shoulder-blades: At the beginning of Summer, he living in the Country, and his Iſſues being neglected for many weeks, the filth which was wont to be purg'd forth, ran much leſs from them; yet he was ſtill in good health, till about the Solſtice, when as he was ſitting one morning in a Porch, and talk'd cheerfully with his friends, ariſing on a ſudden he complained that he was ill: going in a doors, and ſetting himſelf down in a Chair, he vomited very much, then preſently leaning to one ſide, he fell into a profound ſleep, and lay ſo overwhelmed with it, that he could ſcarce be raiſed from it all that day. Coming in the Evening, I ordered *Blooding*, *a Clyſter*, *Veſica-*

tories, and many other Remedies proper in ſuch a caſe, carefully to be adminiſtred: The next day after, his Brain began to grow a little clear; ſo that he looked about, and ſpake diſtinctly a few words: Seeming to know his Friends, he could tell no ones name; but by reaſon of this matter ſinking deep in the Brain, a Palſey of the whole right ſide ſeized him. Moreover, a mighty ſleepineſs yet perſiſting, on that day Blood was taken from the other Arm: Other Remedies alſo being continued as before, on the third day, becoming leſs drowſie, he began to know many, and to call ſome by their names, to perceive his illneſs, and to be ſollicitous for Remedies: But whilſt the Brain grew better, the injury communicated to the *Cerebellum* and *Genus Nervoſum* diſcovered it ſelf; for on the fourth day his breathing became uneven and difficult, and his Pulſe weaker: Moreover, he was often affected with a ſhivering, and a Convulſive concuſſion of the whole Body: On the fifth day, the Cramps and Convulſions becoming more violent, often infeſted him; then the Pulſe growing weaker by degrees, on the ſixth day, tho more free from ſleepineſs, he dyed: In this, and other the like caſes, it's probable that the morbifick matter invades the Brain and *Cerebellum* together; but whilſt it ſticks in the *Cortex* of this (contrary to what happens in the Brain) it cauſes no very ſenſible injury, becauſe here the parts offended are neither the ſeats of ſleep, nor memory: but afterward, haply about the fourth or fifth day, the matter ſinking further to the *Medulla* of the *Cerebellum*; whilſt as to other things the Diſeaſed was better, the Vital function, by reaſon of the Spirits appointed for it being oppreſt in their very ſource, began to fail, and afterward declining on a ſudden, unexpectedly cut off all hope of recovery, which before was great.

CHAP. IV.

Inſtructions and Preſcripts for curing the Watching Evil, and the Watching Coma.

AS Light and Darkneſs, ſo Sleep and Watching being ſet together, excellently illuſtrate each others natures.

Concerning a continual waking, or the *Watching-Evil*, we muſt in the firſt place here diſtinguiſh, that either it is a ſymptom which happens upon ſome other Diſeaſe, as a Fever, Frenſy, *Mania*, or

or Colick, Gout, and the like; and then its conſideration and cure belong to that affect, whoſe offspring it is; or elſe immoderate Watchings ariſing alone with out any other known cauſe, ſeems to be a Diſeaſe as it were of it ſelf, as I have known it in ſome Perſons, and ſome of theſe Watchers, tho deſtitute of Sleep, ſeem ſcarce to want it, For the Spirits appear not thereby either torpid, or wearied, or exhauſted: but others bearing ill watching, ſoon become thereupon languid, and loſe their Stomacks, and are forc'd to have recourſe to Opiats, which ſometimes they uſe daily, and in a large doſe without hurt.

We have intimated before, that the cauſe of natural waking, which has Sleep interlaced with it, conſiſts in theſe two things, *viz.* in one of them or both together; To wit, firſt, that the animal Spirits being ſufficiently refreſht, and freed from the fetters of the Nervous Liquor, vigorouſly exert themſelves, and are expanded every way, and eſpecially from the middle part of the Brain to its circumference; then ſecondly, tho they enjoy a clear ſpace every where, and eſpecially in the outmoſt part of the Brain, being then free from the incurſions of the Nervous Juice; yet leſt this expanſion of the Spirits (which is being awake) be any where protracted longer than is fitting, to their too great loſs, both the Spirits being now and then weary, flagg, and as it were repoſe themſelves of their own accord, and withall the Nervous Liquor coming to overſpread the *Cortex* of the Brain, ſtuffs and cloſes their Paſſages. Hence it follows that preternatural and immoderate watching depends alſo on one or both of thoſe two; for either the Spirits being two exhorbitant, and ſtruck as it were with a rage, do not retreat of their own accord, and withall the Nervous Liquor does not ſo fill and ſtop the Pores of the outward part of the Brain, that the Spirits may be forc'd thence inward to a repoſe: Types of both theſe every where preſent themſelves to be obſerved.

And firſt we may obſerve that the Animal Spirits becoming ſometimes exhorbitant, and ſo elaſtick, or otherwiſe irregular, cannot only be appeaſed and repoſe themſelves, but are ſcarce able to be contained within the proper Sphere of their emanation; Wherefore being expanded in a continual watching, they ſo fill the Brain, and keep it extended, that the nervous Juice, tho heapt together in a great plenty at the entrance, cannot be admitted; and if the Spirits are recall'd inward from the *Cortex* of the Brain, for that to enter, preſently being there reſtained, or making a tumult within the midſt of the Brain, they raiſe a thouſand, and often horrible Fantaſms, with which Sleep is kept off; or directing farther their Tendency into the *Genus Nervoſum*, they raiſe there great diſorders which continually drive away, and break off Sleep, tho ſeeming never ſo much to be ſtealing on, or to be at hand.

As for the former of theſe, I have often obſerved ſome troubled with watching, who dreaded to begin Sleep, tho it came on according to deſire:

deſire: for as ſoon as being about to ſleep, they cloſed their Eyes, preſently ſtarting up again they cryed out that a confuſed multitude of Fantaſms made them mad, ſo that they found themſelves neceſſitated to abſtain from Sleep.

Secondly, when the Spirits being become exhorbitant, are called from the circumference of the Brain towards the inward parts in order to Sleep, ſometimes they convert their Sallies into the *Genus Nervoſum*, and then either ruſhing in a tumultuous manner into the Nerves that go to the Precordia, or Viſcera, they cauſe diſorders in the reſpective Parts; (hence to ſuch as are ſo affected, as often as cloſing their Eyes they invite Sleep, either Tremblings, Leapings, and Conſtrictions of the Heart, with Failings of the Spirits, and a letted Reſpiration happen or inflations and Swellings of the Viſcera, a Senſe of Suffocation, and other Symptoms vulgarly accounted for hyſterical) or ſecondly, the Spirits being called from their Watchings, and converted to the *Genus Nervoſum*, ſometimes tranſfer their Sallies into the ſpinal Marrow, and thence into the Nerves that paſs into all the outward Members: wherefore to ſome, when being a Bed they betake themſelves to ſleep, preſently in the Arms and Leggs Leapings and Contractions of the Tendons, and ſo great a Reſtleſſneſs and Toſſings of their Members enſue, that the diſeaſed are no more able to ſleep, than if they were in a Place of the greateſt Torture. Sometime ſince I was adviſed with for a Lady of Quality, who in the day time was wont to be afflicted with a *Cardialgia*, and a Vomiting, and in the Night was hindred from Sleep by reaſon of thoſe ſpaſmodick affects which came upon her as now and then ſhe was upon the point of reſt: nor indeed was ſhe able to ſleep all Night, unleſs ſhe took firſt a pretty good doſe of *Laudanum*: Wherefore of this Medicine which at firſt was allowed her only twice a Week, ſhe took afterward daily for about three Months, receiving no injury thereby, either in the Brain, or about any other function, and when in the mean while by the uſe of other Remedies, the diſcraſies of the Blood and Nervous Juice being corrected, the animal Spirits became more benign and mild, ſhe afterward leaving off wholly the *Opium*, was able to ſleep indifferently well.

As to the cure of the *Watching-evil* (which we even now deſcrib'd) becauſe it cannot be long endured, therefore thoſe things are chiefly to be given, which give a preſent relief: for this end thoſe things are proper which ſooth the Spirits, and gently appeaſe their Diſorders, as the vulgarly called *Anodines*, *viz.* diſtilled waters, Decoctions, Syrups, and Conſerves of Flowers of Nymphea, Cowſlips, Mallows, Violets, Knapweed, the Leaves of Lettice, Purſlan, the Willow, alſo *Emulſions*, *or juicy Expreſſions*. And if the reſtleſs Spirits will not be mitigated by fair means, we muſt force them to be quiet, by impoſing Fetters as it were, and uſing Severity: their ſtores ought to be diminiſh'd, and withall the ſpaces in which they may freely, and without

without tumult expand themſelves, ought to be dilated, and cleared from the ſtuffings of other humours, *viz.* of Blood and Serum: for which ends *opening a Vein* ſometimes is proper; *Veſicatories* in a manner always have place; moreover let *Diacodium* and *Laudanum*, in caſe they agree well, be frequently taken; and mean while that the *Opiats* give truce from the violence of the Diſeaſe, let the cauſe of it be eradicated by the uſe of other Remedies, as much as may be: Wherefore day after day, at Phyſical hours, let things be given that take away the ſharpneſs of the Blood and Nervous Juice, and reſtore them to ſweetneſs. In which rank we account *Teſtaceous Powders, Apozemes and altering diſtilled Waters of temperate Antiſcorbuticks, gentle preparations of Steel, ſpirit of Harts-horn, of Soot, and above all things, tincture of Antimony.*

There remains another kind of Watching-evil, whoſe cauſe conſiſts for ſome part, if not moſtly, in the almoſt continual opening or too great gaping of the Pores or Paſſages in the cortical part of the Brain: for beſides that the animal Spirits being ſharp and ſomewhat exhorbitant, refuſe to lye down of their own accord, and to yeild to reſt; and that they are not kept down or ſubjugated by the Nervous Liquor entring the Pores of the Brain, but being free and exempt from all impoſed Burthen, they are expanded alſo within the outward ſpaces of the Brain which are every where open for them, for which cauſe thoſe that have the watching evil perceive no drowſineſs or heavineſs of the Sinciput, no appulſe or deſire of Sleep. I have known ſome affected after this manner, who when they had paſt many Nights one after the other wholly without Sleep, yet being ſtill chearful and brisk, having a good Stomack, and ready at buſineſs, ſeemed not as yet to have wanted Sleep. The cauſe of this doubtleſs is a burnt and melancholy Blood, which ſupplies the outward part of the Brain with a Nervous Juice, not mild and benign, but too much ſcorcht and filled with aduſt Particles, which conſequently is neither apt to ſtay long within the Pores of the Brain, nor kindly to receive and contain the Animal Spirits: Moreover the Spirits themſelves ingendred from it become too elaſtick and reſtleſs in their Nature, ſo that they are neither eaſily appeaſed, nor inclin'd for Sleep of their own accord. Nevertheleſs, being of a fixt Nature, they do not readily fly away, nor are ſoon tired ſo as to flag, but laſt a long time and continue vigorous without any great refreſhment. Concerning this ſleepleſs Diſpoſition of the animal Spirits, ſince it is the ſame as in Perſons troubled with melancholy, we ſhall have a fit place of ſpeaking ſomewhat more largely of it in the ſequele. We may obſerve that Coffee alſo on the ſame account keeps Perſons from Sleep, for that Drink inſinuates its aduſt Particles (with which we find it to abound both by the taſt and ſmell) firſt into the Blood, and then into the Nervous Juice, which thereupon by their Agility and Reſtleſſineſs both keep the Pores

of

of the Brain ſtill open, and add ſpurs and a certain rage to the Spirits (all other Combination and Stupefaction being depoſed) by which they are ſtirred up to a longer execution of their Functions. Again, as to what regards the prophylactick cure of this Watching-evil, or the removal of the morbifick cauſe; we ſhall give it you in the Sequel, where we ſhall treat of Melancholy mean while for the immediate removal of that Symptome as often as it ſorely preſſes, we obſerve that *Opiats* will not do; for being given in a good large quantity they ſeldom cauſe Sleep, and render the affected more faint and weak. It often ſucceeds better if going to bed they take ſome gentle and pleaſant drink, as eſpecially our *Ale* being clear and mild, or *alſo poſſet drink with Cowſlip Flowers boyled in it, or an emulſion of the Seeds of Melons and Almonds* in a great quantity, *viz.* to two or three pounds.

I was adviſ'd with ſome time ſince for an old hypochondriacal man, who, beſides other ſymptoms uſual in that caſe, had liv'd for many years obnoxious to a frequent, loud, and very troubleſome belching: He was wont every day to fall a belching twice or thrice, for about two hours together, and with ſo great a noiſe that he was heard to a great diſtance: But ſometimes for a week or two, and ſometimes for a month, that belching was chang'd into a watching; for the former affect becoming much more remiſs, the worthy man paſt often whole nights without ſleep; and when ſometimes he had been conſtantly waking for three or more days, not yet ſeeming to want ſleep, he complain'd of no drowſineſs, dulneſs, or failing of the Spirits. Narcoticks having ſeldome or never given him relief, he took ſometimes in the evening *Poſſet-drink made with Ale, or Canary*; at the beginning of the night he drank ſometimes *Ale*, ſometimes *Diſtill'd Waters*, by the uſe of which a little ſleep often followed; then afterward the Watching-evil vaniſhing by degrees, the belching return'd. Whence it may appear that the cauſe of both was the ſame, *viz.* aduſt and irritating Particles ſent from the maſs of Blood, ſometimes into the Coats of the Stomach, ſometimes into the cortical part of the Brain.

2. Beſides theſe diſtinct affects or exorbitancies of ſleep and waking, there remain other conjunct or complicated irregularities of them, in which the acts of both functions are perverted together, which we may obſerve in the affect vulgarly call'd the *Watching Coma*; concerning which we ſhall now ſpeak in ſhort.

Thoſe that are troubled with the *Watching Coma*, tho they are always inclin'd to ſleep, yet they can ſcarce ſleep at all, but ſeem, like *Tantalus*, to ſtand always up to the Lips in the River *Lethe*, for ſipping of which, whenever they ſink themſelves deeper, the yielding Waters always ſubſide lower. They feel a very great heavineſs of the Head, with a drowſineſs of the ſenſes, and all the faculties; ſo that they are troubled to move themſelves any way in their Bed, or to be diſturb'd by the

ſpeech

ſpeech of ſtanders by, that ſpeak to them, ſtill expecting to fall preſently into a quiet ſleep: to which nevertheleſs when they wholly yield up themſelves, and endeavour ſtraitly to embrace it, various phantaſms preſenting themſelves to their mind, keep them ſtill waking, nor permit them at all to enjoy that Sleep which ſeems always to be ready for them. To this often is added a *Delirium*, ſo that whilſt the Diſeaſed lye with their Eyes clos'd, they talk always abſurdly and at random, and throw their Arms and Legs this way and that in a diſorderly manner, and being awak'd, look gaſtly. It's a uſual thing for ſuch as are in Fevers to continue all night overwhelm'd with a ſleepineſs, as it were; but ſo that in the mean while they are ſcarce ſilent for a quarter of an hour, but mutter various things with themſelves, nay, ſometimes cry out, howl, and leap out of Bed. If the reaſon of this be enquir'd into, it ſeems that we ought to ſay, that the Pores and Paſſages in the Brain, which are the avenues of the Spirits, are very much poſſeſt by a groſs and ſoporiferous matter, ſent from the maſs of the Blood, ſo that the Spirits being very much letted from their wonted expanſion and mutual commerce, a great and invincible Sleep ſeems preſently to be at hand: but in as much as certain ſharp and very active Particles ſtick to thoſe Spirits as ſo many ſtings, they are inceſſantly incited to motion, and therefore ſome of them forcibly paſs the wayes, however ſtopt and beſet with fence, and meet againſt each other directly or obliquely, according as they can find a way: and ſuch their motion, tho it be not able to procure a compleat exerciſe of the animal function, yet it eaſily hinders its reſt and ceſſation, ſo that thoſe that are troubled with this Diſeaſe keep betwixt Sleep and wake.

The *Watching-coma* is ſeldom a Diſeaſe of it ſelf, but for the moſt part is a ſymptom, and happens upon other affects, as a Fever, the Frenſy, Lethargy, and the like, wherefore, it does not require a peculiar method of Cure; but it ſeems only to be needful, that to the Remedies primarily indicated, other Cephalicks be joyn'd, which may diſperſe theſe meteors, as it were, like Clouds and Lightning; or if both of them cannot be exterminated together, let the Medicine joyn it ſelf to the aid of one affect, by which that being becom ſuperior, let it preſently overcome the other; ſo in a ſleepy Watching it is proper to procure either a perfect Sleep or a perfect Watching; and in this caſe I have often given *Narcoticks* with good ſucceſs.

CHAP. V.

Inſtructions and Preſcripts for curing the Incubus or Night-mare.

SO far of the irregularities, or morbid Exorbitancies of Sleep and Watching, which being proper to, and as it were peculiarly attending the *Brain*, affect the *Cerebellum* but rarely, and only ſecondarily; but there remains an affect (vulgarly call'd the *Incubus* or *Nightmare*) which being peculiar to this Region, and in ſome ſort analogous to the ſoporiferous Diſeaſes; in as much as its Fits ariſe in a manner from hence, that by reaſon of the Animal Spirits being bound or ſuppreſt in the *Cerebellum*, an Eclipſe or interruption of them (tho ſhort) is caus'd in the exerciſe of the vital Function.

That the nature of this Diſeaſe may be the better known, in the firſt place let us conſider its *Phænomena*. A Fit of the *Incubus* moſt commonly, and in a manner only ſeizing us whilſt we are aſleep, is wont to be rais'd for the moſt part after the Stomach's being loaded with food of ill digeſtion, and a lying on the back in bed: thoſe that are troubled with it ſeem to perceive themſelves chiefly offended with it in the Breaſt and about the Præcordia: for reſpiration being ſuppreſt or very much hindred, they think themſelves oppreſt with a certain weight lying heavily on the *Thorax*, which weight cheats their imaginations ſometimes with one Apparition, ſometimes with another; and when they think to ſhake it off, or put it from them by the motion of their Body or Limbs, they are not able to ſtir either their Body or any Limb any way; but after a long ſtruggling in the Præcordia, and ſometimes almoſt to the loſs of Life, at length they awake, and being fully come to themſelves from their ſleep, the imaginary weight vaniſhes on a ſudden, and the moving force of the Body is reſtored, there remaining nevertheleſs for the moſt part a trembling of the Heart, and often a very quick and violent vibration of the Diaphragm; afterwards, the Fit being ended, the deception of the Fancy, apprehending the dreadful ſpecies of an *Incubus*, comes alſo to be known.

Now, tho we allow the monſtrous Species (which is conceiv'd) of the *Incubus* to be a meer Dream; yet it is manifeſt that the Præcordia are really affected, and that the motions of the Pulſe and Reſpiration are in a manner ſuppreſt or letted, *viz.* in as much as that oppreſſion of the Breaſt is plainly perceiv'd by many whilſt they are awake, nay, as they are freſhly ſtirr'd from ſleep, and when that is remov'd, trem-

blings

blings and disorderly motions of the Heart and Diaphragm ensue; whence it follows, that these Parts are cumbred, and undergo a real damage.

Wherefore, whatsoever others may think, I judge that a Fit of the *Incubus* is caus'd, insomuch as in sleeping a certain incongruous matter is distilled into the *Cerebellum* together with the nervous juyce, which causing a heavinesse or certain stupefaction to the Spirits in their first source, forces them presently to forbear a little from the performance of their Functions; so that by a second Lethargy, as it were, raised within the *Cerebellum*, the vital actions suffer a short Eclipse; during which, partly from the striving of the overcharg'd Præcordia, and partly from the Blood being very much heapt together and stagnating within them, that oppression, and sense of an incumbent weight, as it were, is caused: moreover, because all the other faculties of the whole Body depend on the motion of the Heart, therefore this being hindred and suppresst, those presently fall into faintiugs and disorders.

Tho it be seldom that any Person dyes of this Disease alone, yet those that are frequently obnoxious to it, if at any time they are seis'd with other cephalick affects, as the *Lethargy*, *Carus*, *Apoplexy or Lethargy*, they are in a very dangerous Condition, because the morbifick matter, sent from the Blood into the Brain, easily invades the *Cerebellum* also, being so prediſpos'd; so that the Diseased suffering an Eclipse of the vital function together with the animal, are brought into a greater danger of Life: hence its a common observation, that those that are wont to be frequently troubled with the *Incubus* often dye Apoplectical.

Another Issue of the *Incubus* is wont to be less pernicious, that it often leads to the passion of the Heart, and other Affects commonly accounted for Hypochondriacal. I have known many troubled with the *Incubus* in their Youth, who, as they grew farther in years, being free from that, were affected with a Trembling and Panting of the Heart, and with other Griefs about the Precordia, and Hyphochondres, and very sorely with Convulsions; we judge the cause of this morbid change to be, that the morbifick Matter, after having been often wont to beset the circumference of the Brain, at length, making a violent assault, penetrates deeper into some private Place, and passing its texture, rushes into the Nerves appointed for the Precordia.

As to the Cure of this Disease, for as to its Fits, because they soon pass away of their own accord, there is no need of it: the therapeutick Method, after a provision to be made for the whole by blooding (where it is proper) and a gentle Purge, suggests to us the chief use of those Remedies which are vulgarly accounted *Cephalicks*: therefore the *Powders of Amber*, *Coral*, *Pearl*, *Roots of male Peony*, *bastard Dittany*, *Contrayerva*, also *Electuaries*, *Tablets*, *distill'd waters*, *Tinctures*, *Elixirs*, and other things wont to be prescrib'd in the Lethargy and

Apoplexy, have place here; but in the first place, a due form of Diet being ordered, let food that is gross, and of an ill concoction, Pulse, and horary Fruits be avoided, nor must the Person indulge himself to sleep, studying, or reading presently after eating: let large and late Suppers, and lying on the back be forbidden.

Because Infants and Children are often troubled with this Disease, (a sign of which is, that they are shaken in their Sleep, and upon their awake cry out terribly) and having undergone frequent fits of it, often fall into convulsive affects: therefore as soon as they seem affected with it, let a due method of cure be used to them: let it be enquired concerning the Milk they suck, whether of it self being without fault, and laudable, it agrees well with their Stomack? let them not be permitted to Sleep presently after having suckt their fill: Let the Nurse, using a good form of Dyet, take also Morning and Evening a Dose of a *Cephalick Powder or Electuary, drinking after it a draught of Posset-drink, with the Leaves of Sage, or Betony, or the Roots or Seeds of Peony boyled in it*; Let the Infant take twice a day a Spoonful of an *appropriate distilled Water*: Let it have an *Issue* in the nape of the Neck, let it lye sometimes on one side, sometimes on the other, but seldom or never on the back. It will not be wholly without benefit, for it to wear about the neck or on the pit of the Stomack, *Coral, or Bracelets made of the Seeds or Roots of male Peony*: If at any time in sleeping, being often and sorely shaken, they seem to be dangerously affected with this Distemper, let *Vesicatories* be applyed to the Neck, or behind the Ears; Moreover Evening and Morning let a Dose of the *Pulvis de Gutteta*, or some other that is appropriate, be daily given in a Spoonful of distilled Water, or in Juleps.

CHAP. VI.

Instructions and Prescripts for curing the Vertigo.

After having viewed the outward circumference of both Brains and discovered the Diseases that beset the sensitive Soul, about the first beginnings, and the first sources of the Animal Spirits; now descending to the middle of the brain, where the Fancy and common Sense reside, let us see to what affects these Parts are obnoxious. Concerning this, let it be observ'd in the first place, that of the Spirits residing in those places, sometimes Troops, or rather mighty Armies, sometimes also small handfuls are affected; and then that the same, whether

ther many of them together, or a few only are affected, either from their heterogeneous combination are made elaſtick, and conſequently are forced into diſorderly, or rather explosive motions, as in a Fit of the Epilepſie; or undergoing an Eclipſe, as in the Apoplexy, are depriv'd of all motion: We have diſcours'd amply enough before of the former ſpaſmodick affect of the Spirits; and concerning the *Apoplexy* we ſhall treat in the ſequel. At preſent we ſhall ſpeak of a certain Paſſion belonging to theſe Parts, *viz.* the *Vertigo*, in which ſome Files of the Spirits are affected, and their motions ſeem partly to be perverted and partly to be ſuppreſs'd.

The *Vertigo* is thus deſcribed, *viz.* that it is an Affect in which viſible Objects ſeem to turn round, and thoſe that are affected with it find a great trouble or confuſion of the Animal Spirits in the Brain, ſo that they do not duly influence the Nerves: wherefore the ſeeing and locomotive Faculties often ſomewhat waver, ſo that the Diſeaſed fall down and are often offuſcated with Darkneſs.

In a fit of this, it is to be obſerved that the Imagination and common Senſe are in ſome ſort deceived: whilſt they think the Objects that ſtand ſtill do move, but the rational judgment holds good, for we know our Errour.

That the morbifick cauſe of the *Vertigo*, and the preternatural way of its hapning may be known, we muſt enquire after what manner the ſame affect, how ſuddenly ſoever it comes upon us, is wont to be raiſed by non-natural things, for by a long turning round of the Body, by looking from an high place, paſſing over a Bridge, by ſailing in a Ship, or going in a Coach, by Drunkenneſs, or taking Tobacco, and certain other ways, Perſons every where become Vertiginous, or contract a Giddineſs: which Affect thoſe occaſions produce, in as much as the animal Spirits being greatly diſturbed in their ſet Series and orders, are both moved looſely and in a diſorderly manner this way and that within the Paſſages of the Brain, and break off certain Lines or Threads, as it were, of their wonted irradiation into the *genus Nervoſum*; for thoſe two things being in a manner always reciprocal, mutually ſucceed and depend on each other, *viz.* the Perturbation of the Spirits within the middle of the Brain, and their letted emanation into the *genus Nervoſum*: On whatever cauſe either affect is produc'd, preſently the other follows. A turning round of the Body, being carried in a Coach, or Ship, alſo Drunkenneſs, an unuſual taking of Tobacco, force the Spirits to fluctuate or to reel diſorderly in the Brain, which thereupon are preſently hindred from their due emanation into the Nerves, ſo that the Perſons affected are ſcarce able to ſtand or go; In like manner, a looking from an high place, paſſing over a Bridge, a Fainting or Swoon ſeizing us, recall the Spirits from their wonted emanation into the *genus Nervoſum*, which therefore falling in a tumult, or being diſorderly mov'd within the Brain, cauſe a *Scotomia* or a running round of Objects.

Theſe

Theſe things being thus premitted concerning the *Vertigo*, rais'd by reaſon of ſome accident, or by ſome evident, ſolemn, and non-natural cauſe; we muſt now enquire how, and after how many ways it is wont to be produc'd by an intrinſecal and preternatural cauſe.

Concerning this you may obſerve, that the *Vertigo* is ſometimes a ſymptom depending on ſome other affect, ſeated ſometimes within the Brain, ſometimes without it; but that ſometimes it is a Diſeaſe by it ſelf, which being raiſed within the middle of the Brain, is very troubleſome, and often terrible, and difficult to be cured.

As to the former, many Diſeaſes of the Head, *viz.* an acute Pain, the *Lethargy*, *Epilepſy*, *Carus*, *Apoplexy*, with many others, have often a *Vertigo* joyned with them, *viz.* inaſmuch as an even expanſion of the Spirits in the Brain, and their irradication thence into the *Genus Nervoſum*, is lightly diſturbed from thoſe various morbifick cauſes.

Moreover, this ſymptom is wont ſometimes to be produced by reaſon of other affects ſeated far from the Brain, and that chiefly after two manners; For firſt, it is uſual for a *Scotomia* to ariſe by reaſon of the afflux of Blood call'd on a ſudden from the Brain, as in a ſwoon, and great fainting, in great hunger, hard labour, a very great hemorrhagy, long faſtings, violent paſſions of fear or ſadneſs; nay, through other occaſions, if at any time the motion of the Blood fails or faulters in the Heart, ſo that the affected are ready to fall into a fainting of the Spirits, preſently becauſe the ſupply of the Vital Liquor is withdrawn, the Animal Spirits alſo failing in the Brain, withdraw their irradiation from the *Genus Nervoſum*: For their Head-ſpring being cut off, thoſe that remain flying back from their emanation, run to and fro confuſedly in the Brain, and raiſe vertiginous, and often delirous affects.

Secondly, a diſorderly retreat of the Animal Spirits from ſome one of the *Viſcera*, or ſome outward member into the Brain, often cauſes a *Vertigo*, *viz.* inaſmuch as the Spirits being troubled in a long ſeries from the Part affected by the *Ductus*'s of the Nerves, at length trouble others inhabiting the middle part of the Brain, and force them into the like diſorders: for this cauſe it is, that ſharp humours twitching the Fibres of the Stomach, and that often an offenſive and irritative matter ſtirr'd in the Spleen, *Pancreas*, or Inteſtines, and an acute pain, Ulcers, *&c.* in the Foot or Arm, often cauſe light *Scotomias* in the Brain.

But the *Vertigo* is not only a ſymptom, but ſometimes is a diſeaſe primarily, and of it ſelf: for the through underſtanding of the nature of which, we muſt enquire into its ſubject, formal ſtate, and cauſes.

The Immediate *Subject* of the *Vertigo* are doubtleſs the Animal Spirits, which every perſon troubled with this affect perceives to be very

very much troubled, and to move about in a confuſed manner; but the mediate ſubject are thoſe parts of the Brain in which Imagination and common ſenſe reſide, and whence the next way leads into the *Genus Nervoſum*: Now theſe are the *Corpora Calloſa, and Striata.*

For the Animal Spirits love to expatiate themſelves within theſe medullous Bodies; and when they ſmoothly flow in one ſeries from the two extremes attending the *Corpus Calloſum* (*viz.* from the *Corpora Striata*, and *Gyri* of the Brain) towards its middle part, they repreſent pleaſant imaginations and fancies: and when in another ſeries and haply by other Pores, they flow from the midſt of the *Corpus Calloſum* into the *Gyri* of the Brain, they carry thither the ſignatures of notions for the memory; and when they direct themſelves thence into the *Corpora ſtriata*, and origines of the Nerves, they actuate all the moving parts, and as often as there is occaſion, convey to them the Inſtincts of ſetting upon motions.

Now in a *Vertigo* thoſe even emanations of the Spirits ſeem to be intercepted in various places, and to be diverſly perverted, for ſome files of the Spirits are rendred obſcure, others are wreſted another way, and are driven this way and that into *Gyri* and *Vortex*'s, and often are forcibly drawn croſs-wiſe; wherefore by reaſon of the Spirits being ſo troubled in the Brain, confus'd fancies, erring and unconſtant ſpecies of ſenſible things or turnings round of them are repreſented: And then, according as the Irradiation into the *Genus Nervoſum* is leſſen'd or ſtopt, a *Scotomia*, and failings and faulterings of the locomotive function enſue.

It ſeems probable that ſuch diſorders of the Spirits depend on two cauſes, *viz* firſt, that ſome exorbitant and extraneous particles being entred the Brain deeply together with the Nervous Juice, cleave to the Spirits, and force them into irregular motions; it being manifeſt to vulgar experience, that this happens to ſome perſons after immoderate drinking of Wine, or Strong Waters, unuſual ſmoaking Tobacco, the eating of certain Vegetables, an anointing with Mercury, *&c.* Secondly, we may imagine that ſometimes a ſerous glut of filth gets by degrees into the Brain, together with the Nervous Juice, and when at length it has penetrated deeply into it, it defiles theſe pure *Medullæ*, and greatly ſtuffs its Pores: So that the Animal Spirits do not diſplay their beams with a light that is clear and full, but ſuch as is weak and broken, with many little Clouds, as it were, ſcattered here and there.

In an habitual and inveterate *Vertigo*, the conjunct cauſe comprehends both theſe, as it appears from the things that give relief, or prove offenſive. For I obſerve that that affect is altered for the better or worſe, on two kinds of occaſions: For whatſoever things inwardly taken engender turgid Particles, and ſuch as are too exorbitant and apt to be troubled, as Wines, Strong Waters, pepper'd and flatulent

flatulent meats, in a manner always affect vertiginous Persons: nor do they find less injury by reason of occasions by which the Brain is fill'd and stuffed, as are surfeiting, sleeping at Noon, or too long in the morning, a Southerly Wind, a moist, misty, and thick Air; a low seated and marshy habitation: and on the contrary, the same are very much relieved by a thin and light Diet, a clear Air, and an open Country exposed to the Winds.

If we enquire into the procatarctick Cause of this Evil, *viz.* for what morbid prediſposition this double evil is wont to be brought on the Spirits residing in the middle part of the Brain; we find that here both the Brain with the nervous Liquor, and the Blood with the Humours residing in it are in the fault.

It is a common fault of the latter, that degenerating from its due Crasis into a sharp or otherwise vitious temper, it perverts the nutritive juyce, and likewise heaps together within it a Serum, and filthy dregs of various kinds, which it is ready to discharge on the Head.

The fault of the Brain is, that its temper is moist and weak, its texture loose and not firm, and has its Pores more open than they ought, and too much gaping, so that any heterogeneous and elastick Particles, and likewise serous, or otherwise morbid recrements, being sent from the Blood into the Head, are easily admitted into the Brain together with the nervous juyce, and by reason of its passages being too open, descend without obstacle into the midst of it, *viz.* the *Corpora calloſa* and *ſtriata*. Moreover, such as are of a tender Constitution, easily contract this vertiginous disposition; for the Spirits of the Brain being weak, and unable to resist foreign incursions, yield a passage to any matter coming thither: Again, to others, tho robust Persons, a disorderly Diet, a sedentary Life, frequent surfeiting, also immoderate Sleep and Studies, likewise the Scurvy, an inveterate *Cachexia*, Fevers of long continuance, and other Cephalick Diseases, often bring this ill habit of the Brain.

As to the prognostick of this Disease, every new *Vertigo* for the most part is void of danger; but being habitual and continual, tho it seldom threatens a great or imminent danger, yet because it admits not but a long and very difficult Cure, it most commonly so tires both the Diseas'd and the Physician, that before the Disease can be cur'd, one grows weary of the other.

A primary *Vertigo* seated in the fore-part of the Head, which scarce at all causes a dizziness or falling on the ground, being more safe and curable, is often chang'd into a Head-ach; sometimes also it goes off of its own accord, by a bleeding at the Nose, or a Flux of the Hemorrhoids, and is often removed by Physick.

A vertiginous affect arising in the hinder part of the Head, and intercepting the irradiations of the Spirits into the Nerves, being far more

more dangerous, often passes into an *Apoplexy*, or *Palsey*, or into *Convulsive Diseases*.

A *Therapeutick Method* does not properly belong to a *Symptomatick Vertigo*. It will only be necessary that certain Cephalick Remedies for discussing the Clouds of the Brain, and appeasing the disorders of the Spirits be joyn'd to the first things indicated; or rather, to speak according to the capacity of the vulgar (which we must sometimes, tho only for shew) that certain Medicines against vapours be added to them.

An *Accidental Vertigo*, or any other that is new, for the most part is cur'd only by Blooding and a gentle Purge, sometimes repeated: Nevertheless, for the more certain extirpation of the disease, let *Cephalick Remedies* likewise, such as shall presently be written, be carefully administred.

For the *Cure of an Habitual Vertigo*, and such as is become inveterate, in a manner the like method ought to be ordered as against most other Cephalick Diseases, Which suggests these three chief intents of Healing: *viz.* first, we must endeavour that all fuel of that Disease being cut off, the Brain may continue free from any new afflux of morbifick matter; for which end, a due form of dyet being ordered, sometimes bleeding, and very often a gentle Purge given at due intervals of time will conduce: Let a dry and well ventilated Air be chosen, let immoderate and unseasonable sleep and studies be shunn'd; let morning and evening draughts be wholly forborn: Instead of the former, let a draught of *Coffee* or *Tea* be given, with the *Leaves of Sage* boyl'd in them; let an Issue be made in the Leg or Arm; and sometimes let the Hemorrhoid Vessels be open'd by Leeches: Let the Person affected always rise early in the morning, and wash his Temples and Sinciput with cold Water, and rub them with a course Cloth.

The second Therapeutick Intention will be to remove the Procatarctick cause of the *Vertigo*; wherefore let it be endeavoured, both that the Cacochymical dyscrasy of the Blood be taken away, and that the weak and over-lax constitution of the Brain be corrected. In order to the former, Remedies powerfully altering, as temperate *Antiscorbuticks*, *Chabyleats*, and sometimes *Spaw-waters*, or *Whey* are proper: To which, always by reason of the latter thing indicated, let Cephalick Medicines, *viz.* such as are prepar'd of *Coral*, *Amber*, *man's skull*, *the root of male Peony*, *Mistletoe*, *Peacocks dung*, and the like, forms of which we shall presently give you, be added.

The third Intention, and which is properly curatory, attempts the taking away of the conjunct Cause of this Disease, tho it ceases for the most part of its own accord, upon the removal of the procatarctick Causes. For if the passage of every extraneous matter into the Brain be cut off, nothing will hinder, but that the Spirits being as pure as may be, and having gotten free and open spaces within the *Corpus callosum*, may flow thence every way. However, that we may prosecute

this ſcope of curing together with the former, we muſt alſo interchangeably uſe *Medicines endow'd with a volatile Salt*, whoſe Particles being very ſubtle and active, refreſh the animal Spirits; of which kind chiefly are the *Spirits of Harts-horn, Soot, Sal Armoniack impregnated with Amber, man's skull*, &c. the *tinctures of Coral, Amber, Antimony, the Elixir of Peony*, &c.

Theſe things being thus premitted concerning the *Vertigo* in general, it ſeems likewiſe proper for us to delineate a therapeutick method more particularly, and to give an orderly proceſs of it: And firſt, it ſhall be ſhewn what is to be done in the Fit for curing it, and then what out of the Fit for preſervation.

1. As to the former, tho an invaſion of the *Vertigo*, how violent ſoever it may ſeem, for the moſt part is free from danger, and often paſſes off eaſily of its own accord; yet becauſe thoſe that are affected with it, fearing themſelves a dying, deſire Phyſical Aid; in ſuch a caſe, if the Pulſe indicates it, a Clyſter being premitted, let bleeding be ordered; then a Veſicatory being applied to the Neck, let ſtrong-ſmelling things, as *Caſtoreum, Spirit or volatile Salt of Harts-horn, Urine, or Sal Armoniack* be preſently held to the Noſtrils: moreover, let thoſe Spirits be given twice or thrice a day, with a convenient doſe of a *Cephalick Julep*; going to bed let a *bolus of Mithridate with powder of Caſtoreum* be taken: the day following, if the affect be not yet gone, let a gentle Purge be given; or if the Diſeas'd be inclined, or eaſie to vomit, let an *Emetick* be taken, than which there is ſcarce any Remedy more excellent.

Take Pillulæ de Succino twenty five grains, Roſin of Jalap ſix grains, Tartar vitriolat ſeven grains, Balſam of Peru what ſuffices, make four Pills to be taken going to bed, or early in the morning: or,

Take Sulphur of Antimony five grains, Cream of Tartar half a ſcruple, Caſtoreum two grains, make a powder, to be taken with governance, expecting a vomiting.

That *Vomits* often do good in the *Vertigo*, beſides the teſtimony of Authors, it ſufficiently appears alſo by common obſervation; and ſince vertiginous Perſons vomit often of their own accord, hence an opinion has grown amongſt many, that the cauſe of this Diſeaſe lies hid in a manner alwayes in the Stomach, but we have ſhewn elſewhere that this is otherwiſe, and that the vomiting frequently happens by reaſon of the Spirits being troubled in the Brain. Now the reaſon why Emeticks do good in this Diſeaſe, is, that by this kind of Medicine, both a very great Revulſion is made of Humours from the Brain, and that the Spirits there being in a tumult, are preſently reſtrain'd. When the Membranes and Fibres of the Ventricle and the Viſcera placed near it are twitcht, various Humours, viz. the nervous, ſerous, lymphick, pancreatick and bilous, are drawn into thoſe Parts, and ſo dreined that the Brain continues free from their Incurſions, nay, and eaſily throws off

off a great many then ſticking in it; Then, as to the animal Spirits, we have ſhewn elſewhere that there is alwayes a very great communication and intimate accord betwixt thoſe that reſide in the Stomach and thoſe of the Brain; ſo that a grateful or ingrateful affect of the Stomach from things taken, cauſes erections or dejections of the Spirits reſiding in the Brain. *Opiats*, whilſt remaining in the Stomach, bring a ſleepineſs, ſo in the *Vertigo* and other Cephalick Diſeaſes, it will not conduce a little to the redreſſing and regulating of the Spirits in the Brain, when all in confuſion, and mightily agitated, if their conſociates or relations be put in a conſternation within the Ventricle by an irritating Medicine; for whilſt for the aid of theſe, a great many are call'd from the Brain, the others remaining remit of their diſorders, and reſume their ancient Offices; doubtleſs it is chiefly for this reaſon, that Emeticks often give great Relief in affects of the *Mania*, inſomuch that certain Empiricks uſe in a manner thoſe alone.

2. But returning from this ſmall digreſſion, let us conſider what is to be done for curing an inveterate, and almoſt continual *Vertigo*, out of the Fit: therefore in the firſt place a method being ordered concerning blooding and purging to be us'd, and repeated at fit intervals of time according to the Conſtitution and ſtrength of the Patient; I alſo uſe to adviſe that a Vomit (if nothing indicates the contrary) be taken once a Month; for which end, to weak Perſons, after the Stomach's being fill'd with light food, let *Wine and Oximel of Squills* be given, to two or three ounces, and afterwards let *poſſet-drink with Carduus leaves boyl'd in it* be drank in a great quantity, and let it preſently be thrown up again with a ſpontaneous or forced vomiting: To others, let an *Emetick* be given of *Salt of Vitriol*, or of the *Infuſion of crocus Metallorum*: Concerning *Iſſues*, *Veſicatories*, *the opening of the hemorrhades*, alſo of a *Plaiſter* or *Cap* to be worn on the Head, and *of topicks* to be apply'd to the ſoles of the Feet, or to the Wriſts, for revulſion or derivation, let a Phyſician deliberate.

Take Conſerve of the Flowers of male Peony ſix ounces, powder of its Roots an ounce, Peony ſeeds powdered two drams; Amber, Coral, Pearl powdered of each two drams and a half, Salt of Coral a dram, Syrup of coral what ſuffices, make an Electuary. The Doſe is a dram and a half, or two drams in the evening, and early in the morning, drinking after it three ounces of the following diſtilled Water.

Take freſh leaves of Miſtletow ſix handfuls, roots of male Peony, Angelica, of each a pound and half; the white dung of Peacocks two pounds, Cardamum bruiſed two ounces, Caſtoreum three Drams, all being ſlic'd ſmall, and mixt together, pour to them of White wine, or of Whey prepar'd of it, eight pounds, diſtill it with common Organs, let the whole Liquor be mix'd.

Take powder of the roots of male Peony half an ounce, red Coral prepar'd, Species Diambræ of each a dram and half, powder of male Peony flowers

freſh bruiſed and dried in the Sun, a dram, make a powder, to which add of double refin'd Sugar diſſolved in Peony water, and boyled to a conſiſtency for Tablets ten ounces, make Tablets according to Art, weighing half a dram, let one or two be taken often in a day.

Becauſe all things do not agree with all Perſons, but a Phyſician ought to aſſay divers Medicaments, and inſiſting on a various Method, at one time to try theſe Medicines, another thoſe, therefore I ſhall here ſet down certain forms of another kind.

Take our Syrup of Steel ſix ounces, let a ſpoonful be taken in the Morning and at five of the Clock, with three ounces either of the diſtilled Water even now deſcribed, or of ſome other Cephalick Water: or take from fifteen to twenty drops of our Syrup of Steel with a draught of the ſame diſtilled Water twice a day, I have known theſe things to have given great Relief to many.

Sometimes let doſes of the Spirits of Soot, Harts-horn, or Sal Armoniack, impregnated with Amber, Coral, or Mans Scull, or let tincture of Amber, Antimony, or Coral be daily given after the ſame manner.

Take Powder of the Roots of male Peony an ounce and a half, Peony Seeds, Coral prepared, white Amber of each three Drams; Pearl prepared, Powder of male Peony Flowers freſh bruiſed, and dryed in the Sun, of each two Drams, Sugar-candy one Ounce, make a Powder, let a Dram be taken twice a day, with a draught of Tea or Coffee, or a Decoction of Sage or Roſemary.

For poor People let a Powder be preſcribed of the Leaves of Miſſeltow growing on Apple Trees, dryed in the Sun and powdred, to a dram, to be taken twice a day: or take the white Dung of a Peacock ſix Ounces, powder of the Flowers of male Peony an ounce, Sugar two Ounces, make a Powder, let a Spoonful be taken twice a day in a convenient Liquour.

Let *vertiginous Perſons* uſe for their ordinary Drink ſmall Ale with the Leaves of *Miſſletow growing on Apple Trees* boyled in it inſtead of Hops, and in a Veſſel of four Gallons let a Bag be hung, in which put of *Peacocks Dung half a pound, and of Cloves bruiſed three Drams.*

So frequent and daily Examples of Perſons troubled wirh the *Vertigo* occur, that it ſeems but to little purpoſe to give here any inſtances of them: however that the Types of this Diſeaſe may be known, I ſhall relate here ſome few and rare Caſes.

A Divine ſixty years of Age, after that he had been troubled for about three Months with a ſlight *Vertigo*, or a frequent Coruſcation as it were of the Spirits in the Sinciput, at length the Diſeaſe increaſing, he became affected alſo with a dizzineſs and a falling-Evil; in ſo much that in walking ſometimes he would fall flat on the Ground; Being called to cure him, I preſcribed blooding, with a gentle purge to be repeated at fit intervals of Time, moreover I diligently gave Electuaries and mixtures, ſuch as above-written, Veſicatories and other Adminiſtrations being not neglected: after a fortnight no relief being found from

theſe

theſe things, I gave him a vomit of *Salt of Vitriol*, and an infuſion of *Crocus Metallorum*; upon which having ten eaſie vomits, he preſently from thenceforth was better, and *Cephalick alteratives* being uſed for about a fortnight longer, he grew perfectly well, and from that time he took yearly *Spring and Fall* for ſix years a vomit, with certain other Medicines, and even at this time is in perfect Health,

A certain Gentleman ſixty ſix years old, after that he had lived for a long time obnoxious to a light *Vertigo*, and which was wont to be raiſed as it were only occaſionally, about the end of *Autumn* being more ſeverely troubled with that affect, became alſo forgetful: going to ſee him after he had been ill about three Weeks, I found him very much changed in his Countenance and Aſpect, the vigour of both being very much broken. To this Perſon, who had every Evening a ſmart Feaver, with a high and ſtrongly vibrating Pulſe, in the firſt place I ordered Blood to be drawn from the Arm, and after ſix or ſeven dayes from the hemorrhoide Veins; moreover I had *Veſicatories* preſently applyed to his Neck and incontinently after behind his Ears, and *Cauteries* betwixt his Shoulder-Blades for two large Iſſues to be there made: he took daily inwardly at Phyſical Hours *Cephalick Remedies* almoſt of every kind. Within a Months ſpace ſeeming to recover, he began to walk abroad and to take care of his domeſtick Affairs and other Concerns. But at the beginning of the Winter, upon taking cold, as he went daily abroad, he fell into a ſmall Feaver with a great Perturbation of the Spirits within the Brain: for every day towards the Evening being light-headed, he ſcarce knew what he did, or ſaid, nevertheleſs within ſeven or eight dayes, the Feaver vaniſhing after blooding and a thin dyet, the affect of the Brain was changed from its former ſtate. For the *Vertigo* wholly ceaſing he became very forgetful, and withall Paralytical in the whole right ſide. Being often askt concerning his Head, whether it was clear, and free from a *Scotomia* and confuſed Phantaſms, he anſwered, that as to thoſe things it was never better: for he underſtood well his Infirmity, knew his Friends, Relations, and others that came to viſit him, but could ſcarce call to mind any of their Names: and when he went about to diſcourſe of any thing, he wanted words to expreſs the Senſe of his Mind: Moreover as to the ſide affected, in the right Arm and Thigh, there was not only a total Reſolution and Immobility, but likewiſe in both a very great ædematous Tumour grew, inſomuch that not only almoſt all hope of cure was laid a ſide, but even of keeping him long alive; nay, others were already ſolliciting for the State Offices and Employs he enjoyed.

However, I deſiſted not from proceeding with a Method of cure, and preſcribed him *looſning Pills* to be taken by intervals: and on other dayes, at phyſical Hours, *Cephalick*, *Antiſcorbutick*, *and Antiparalytick Remedies*: I ordered a Plaiſter of Gums and Balſoms to be applyed to his Head ſhaved, the parts reſolved to be anointed and ſtrongly chafed

chafed with Oyles and Balſoms: whilſt theſe things were done with ſome kind of ſucceſs, as to the greater clearing of his Underſtanding; I know not through what cauſe, in the midſt of Winter he fell into a Feaver, ſo that he was greatly troubled every Night with a heat, and mighty drought, and an interrupted Sleep, his Tongue was parch'd and rough, his Pulſe high, his Urine ruddy, and full of contents; we abſtained from blooding by reaſon of his old Age, and Palſie, and chiefly by reaſon of a Dropſie began in the ſide affected: nevertheleſs a *thin dyet and Barly and Oat Broths* being commanded, we gave him day after day *Juleps, Apozemes*, and other Remedies moving *Sweat and Urine*: and as at this time the Iſſues made by his ſhoulder Blades ran plentifully, the diſeaſed began to be better as to his Memory and Palſie, and thenceforward recovering by degrees from both theſe affects, and withall from his Feaver, and daily growing better; within ſix Months he was reſtored to his perfect health, and at this time is very well.

Being tired of late with the almoſt daily complaints of a certain importunate Perſon, troubled with the *Vertigo*, after a great many Remedies us'd to no purpoſe, I preſcribed at length that for a Months ſpace he ſhould take every day twice about a ſpoonful of the following Powder, drinking after it a draught of *a Decoction of Sage or Roſemary, impregnated with the Tincture of Coffee.*

Take powder of the roots of male Peony two ounces, flowers of the ſame bruiſed and dried in the Sun, one ounce; the white dung of a Peacock half a pound, double refin'd Sugar, two ounces, make a powder.

It is ſcarce credible how great a Relief he found by this Remedy. Coming to ſee me again a Month afterwards, he ſeem'd to be a new, and another man; being freed from his *Vertigo*, he did not only walk about with confidence, but was able to take care of his Houſhold affairs, and to manage other difficult Concerns, of which before he was wholly incapable.

CHAP. VII.

Inſtructions and Preſcripts for curing the Apoplexy.

THE ſeat of the *Apoplexy* ſeems to be within the ſame inward portion of the Brain, viz. *The Corpus Calloſum*, as that of the *Vertigo*; to wit, in as much as in both affects the Imagination, common Senſe, tho in a far differing degree, are affected, *viz.* in the former the irradiation of the Spirits, is wont to be obſcur'd in ſome

ſome places, and to be inetrrupted with little Clouds, as it were, ſcattered here and there, but in the latter, the ſame is forthwith wholly darkned, and undergoes a total Eclips.

The *Apoplexy*, according to the import of the Word, denotes a ſtriking, and by reaſon of the ſtupendous Nature of the affect, as tho it contain'd ſomewhat Divine, it is called *a ſideration*: for thoſe that are ſeized with it, as tho they were *Planet-ſtruck*, or ſmitten by an inviſible Deity, fall on the Ground on a ſudden, and being deprived of Senſe and Motion, and the whole animal function (unleſs that they breath) ceaſing, they lye dead as it were for ſome time, and ſometimes dye out-right: and if they revive again, they are oftentimes affected with a general Palſie or an Hemiplegia.

Tho it may ſeem a Paradox, it is not diſagreeing with Reaſon to ſay that the *Apoplexy* is two-fold, and that one of them belongs to the *Cerebellum*, and that the other has its ſeat in the midſt of the Brain: the former happens by reaſon of the animal Spirits deſign'd for the vital function, being ſuppreſt in their very ſource, *viz.* within the *Cerebellum*, the motion of the Heart being often thereby letted or ſuppreſt, as we have intimated before that this happens in ſome ſort in the *Incubus*: and doubtleſs to this cauſe ought to be attributed what I have obſerved in ſome, that after a great heavineſs in the *Occiput*, a Swooning with a ſudden privation of all the animal function enſues: in which the diſeaſed lye without Motion or Senſe, with a Pulſe and Reſpiration greatly diminiſh'd, and ſcarce perceivable, and being all over cold for many Hours, nay, often a Day or two, more reſembling Perſons dead, than living: We have ſometimes known Perſons ſo affected, who have grown cold and ſtiff, their Pulſe and Reſpiration ſeeming wholly to be ceaſed, and who have been really taken for dead, and put in their Coffins, yet after two or three dayes to have come to life again.

To enquire into the cauſes of the other, and the wayes of its coming to paſs, we muſt firſt diſtinguiſh concerning the various Invaſion of this Diſeaſe; to wit, how ſometimes being raiſed from a *ſudden, ſolemn, and invincible cauſe*, without any *previous* Diſpoſition or *Procatarxis*, it is for the moſt part mortal; againſt this no Procatarctick or preſervatory Method can be ordered; and the method of curing it, which is ordinarily entred upon, for the moſt part becomes inefficatious: or ſecondly an *Apoplectick* Fit, having an *antecedent Cauſe*, or a *previous Procatarxis* is brought into act through various Occaſions or evident Cauſes.

As to the ſeiſure of the former kind, *viz.* being ſudden and unawares, its conjunct, and immediate cauſe is either a great Solution of Continuity happning ſomewhere within or near the middle of the Brain; through which its Pores and Paſſages being obſtructed, or compreſt, all emanation of the Spirits is ſuppreſt, or it is a great and ſudden putting to flight, or extinction of the Spirits reſiding in the Brain.

The

The things which are wont to cauſe a great ſolution of Continuity within the Brain, are, Blood extravaſated, an Abſceſs ſuppurated and broken, and an inundation of a ſerous humour; and tho this latter ſeldom or never happens of it ſelf, yet ſometimes, by reaſon of ſtrong evident cauſes, ſuch a glut of ſerous filth ruſhes into the Brain, that preſently filling and ſtuffing all its medullary Pores, it renders the Perſon ſpeechleſs, which I have known to have hapned to ſome upon ſleeping preſently after having drank too largely of *ſmall Wine* and *Spaw Waters*; I have obſerved the like affect upon a total and long continued ſuppreſſion of Urine. And in *malignant Fevers* the ſerous recrements by a *critical Metaſtaſis* being conveyed to the Brain have often cauſed a loſs of Speech with Death.

Of the evident Cauſes by which an *extemporary Apoplexy* is wont to be procured, the other kind conſiſts in a ſudden profligation, or extinction of the Spirits: which *ſtrong Narcoticks*, and an immoderate drinking of *hot-Waters* often effect.

Thus much concerning the Cauſes of the *accidental and extemporary Apoplexy*, which bring a fit of it on all Perſons indifferently, tho not prediſpos'd; and wherefore there can be no *Prophylaxis* ordered, and it is ſeldom that a Cure ſucceeds. But we obſerve beſides, that this Diſeaſe ſometimes is habitual, viz. That there remains in certain men a conſtant Diſpoſition, by reaſon of which firſt ſlight Bickerings trouble them, afterward by ſhort intervals greater acceſſes come upon them: of which for the moſt part they dye at laſt.

As to the conjunct cauſe of this Diſeaſe, it conſiſts in the ſudden filling of the Pores of the *Corpus Calloſum*, and the deſtroying of the Spirits by the approach of a malignant matter.

Its *procatarctick Cauſes* are the like as in moſt other affects of the Brain, viz. both the Blood is in fault, that either engendring of it ſelf, or taking from elſewhere extraneous Particles, and ſuch as are very adverſe to the texture, or conſtitution of the animal Spirits, and as it were extinctory of them, it ſends them to the Brain: and moreover, the fault of the Brain is, that being weak in its *Craſis*, and too lax and looſned in its Pores and Paſſages, it always admits ſo eaſily and without reſiſtance the morbifick matter obtruded from the Blood.

The Subject of this Diſeaſe being the Brain, or the *Cerebellum*, or both together; the Brain is ſhewn to be moſt obnoxious to it, by previous and frequent *Scotomias*, and *vertiginous Affects*: the *Cerebellum* is argued to be ill-diſpoſed by a *frequent Incubus, an intermitting Pulſe, a Swooning, and frequent Fainting.*

The *Prognoſtick* of this Diſeaſe is never declar'd but fatal and dubious: for an *Apoplexy* is never without danger either preſent, or to come, but the worſt is, in which, beſides all the ſpontaneous Functions being aboliſh'd, the Pulſe alſo and Reſpiration either fail, or are carried on with much adoe, and then for the moſt part it happens with a foaming at Mouth,

Mouth, and a Swooning, to which at length a ſweat (which moſt commonly is colliquative) ſupervening, foreſhews that Death will happen very ſuddenly.

Thoſe who being ſeized with the *Apoplexy* are deprived of Pulſe and Reſpiration, and a little after growing cold, ſeem to be dead, ought not preſently to be taken forth of Bed, or to be left without Phyſical Adminiſtrations: moreover, tho no hope of Life appears, let them not be buried till after three or four dayes: for ſuch, either of their own accord, or by the uſe of Remedies ſometimes revive: which happens not by reaſon of the vital heat being raiſed up again in the Heart, (for it was not wholly deſtroyed here) but for that the morbifick matter being diſcuſs'd, or evaporated from the *Cerebellum*, the motion of the Heart is renewed, as that of a Clock upon hanging on Weights.

In an Apoplectick Fit, if after letting Blood relief follows, ſome hope of well-doing appears: but if after this and other Remedies the affect continues above four and twenty hours without remitting, or grows worſe, all hope is over concerning the diſeaſed.

If after the firſt ſeiſure of a ſpeechleſneſs being well over, the diſeaſed afterward becoming more drowſie and dull, is affected with a *Scotomia*, and a frequent *Vertigo*, it is a ſign that he will be obnoxious to other acceſſes of the *Apoplexy*: for the foreſaid affects proceed from the morbifick matter at that time depoſed in the circumference of the Brain, and there floating here and there, and now and then deſcending by ſmall parts only, into the midſt of it, which matter, whether it be Vitriolick or Narcotick, after that it is gathered together to a fulneſs, brings the *Apoplexy*.

The Therapeutick method either is curatory, for removing the fit, after it has ſeized, or preſervatory for preventing it from returning: the former regards every *Apoplexy*, the other only that which is habitual.

A fit of the Diſeaſe hapning (if it does not proceed from an outward or violent hurt of the Head) tho it be unknown whether it be raiſed by an inviſible cauſe (ſuch as are an extravaſating of the Blood in the Brain, or an Abſceſs broken) or not: however we ought diligently to endeavour its cure. And becauſe the Blood being too turgid is wont to induce the morbifick cauſe, or at leaſtwiſe to increaſe it, and when it ſubſides and becomes more calm is wont ſometimes to remove the ſame: therefore in the firſt place we ought to deliberate concerning the moderating of its courſe. And here a queſtion ariſes concerning the ſite of the diſeaſed, *viz.* Whether he ought not preſently to be put to bed, or rather to be kept out of it for ſome time? ſome religiouſly obſerve the latter, nor is it without reaſon, becauſe in Bed there is a greater propenſion to ſleep, and the Blood boyling more, and burning more freely by reaſon of the ambient heat of the Bed, ſends more of the recrementitious matter into the head affected: on

the contrary, when the diſeaſed being thinly cloathed, is plac'd in a Chair, the Blood flows more ſlowly, and the ſubſiding Veſſels ſeem more fit rather for drinking up humours ſent from the Brain, then for ſending them thither. Wherefore, if the Patient be ſtrong enough, it may haply be better for him to ſtay out of Bed for ſix or eight Hours, till the Fluxion of the morbifick Matter be paſt, and the courſe of the Blood be made more calm by blooding, and other Remedies carefully adminiſtred. But let thoſe that are weak, and of a tender Conſtitution, be put preſently to Bed as ſoon as they are ſeiz'd. Let the ſite of the diſeaſed, whether he be in Bed, or out of it, not be on his Back, but the Head ſomewhat raiſed, and leaning ſometimes to one ſide, ſometimes to the other.

Blooding, being neceſſary almoſt in all Apoplectical Perſons, may not be delayed: but a ſmart Clyſter being injected, let Blood be taken in a plentiful quantity. In the Clyſter let there be diſſolved *Species Hieræ Diacolycinth*: and a thick infuſion of *Crocus Metallorum*: let a large Veſicatory be applyed to the Neck, and others to the Leggs, and drawing Cataplaſmes to the feet: let the Temples and Noſtrils be anointed with appropriate Oyles and Balſoms, and let painful Frictions be uſed to the Limbs, nay to the whole Body: meanwhile let thoſe things be now and then given, which raiſe up the animal Spirits, and free them from their Fetters, *viz.* Spirit of Harts-horn, Soot, and the like, with a Cephalick Julep.

Afterward, the diſeaſed being put to Bed (if he ſeems eaſie and able enough to bear a Vomit) let a vomitory of *Salt of Vitriol*, *Oxymel of Squils*, or an infuſion of *Crocus Metallorum* be given: and now and then a Quill being thruſt into his Throat, let a vomiting be raiſed four or five times, Poſſet-drink by intervals being poured into him.

The vomiting being over, let comforting things, as *Quercitans Elixir of Life*, *Spirit of Lavender*, *or of Treacle camphorated*, *Tincture of Peony*, *or of Amber*, *or Coral*, be given in a fit doſe, with Apoplectick and other appropriate Waters, and as occaſion requires let them be repeated.

On the ſecond day the ſame Remedies being ſtill continued, let dry Cupping-glaſſes, or with a ſcarification, alſo be applyed about the Shoulder-blades, or in the Neck: or if more Blood ought to be drawn, let the Jugular Vein be opened; let the Clyſter be repeated; *Let Spirit of Sal Armoniack*, *or a ſteam of Galbanum boyled in ſharp Vinegar be held to the Noſtrils*: Moreover, let *Errhins*, and *Apophlegmatiſms* be uſed: afterward in the Evening let a purge of *Pilulæ Rudii*, or the Electuary of Roſes ſolutive diſſolved in ſome Liquour be given.

Theſe things doing no good, tho there be ſmall or no hope, let either a burning hot Iron, or a large Veſicatory be applyed to the Crown of the Head ſhaved; let the remaining part of it, and chiefly the Forehead, and Sinciput be fomented with *Bezoardick Vinegar*:

Let

Let Leeches be applyed to the Temples, or behind the Ears; Let Spirit of Harts-horn, or of Soot be given him in a large dose, and often; we must insist on these and other ways of administrations till death seems to be at hand, which (as *Celsus* has it) those kind of Remedies often only delay, and in the mean while prove troublesome to life.

The Prophylactick Method regards both those, who have been formerly set upon with one or more Invasions, and those who seem prone to them, as being born from Apoplectick Parents, or being obnoxious to the *Vertigo*, *Incubus*, or frequent Faintings, and such as have the Neck short and thick grown.

Spring and Fall let purging and blooding (where it is proper) be used; as to the former let those that are easie to vomit, take first a vomitory of the Infusion of *Crocus Metallorum, with Salt of Vitriol, or of Sulphur of Antimony*, and then after three or four dayes, let a dose of *Pilulæ Rudii*, or of *Amber* be given; and afterward by due intervals let it it be repeated three or four times: let two large Issues be raised near the Shoulder-blades, or if those Places do not please some, let them have one in the Arm, and another in the opposite Leg.

On other dayes free from purging, let altering and cephalick Medicines be taken twice a day.

Take Conserve of the Flowers of Lillies of the valley (or of male Peony) six ounces, powder of the roots of male Peony half an ounce, mans skull prepar'd three drams, seeds and flowers of male Peony powdered, of each two drams, red Coral prepar'd, Pearl and white Amber of each a dram, Salt of Coral four scruples, syrup of the flowers of male Peony what suffices, make an Electuary: the dose is two drams morning and evening, drinking after it of the following water two or three ounces.

Take roots of male Peony, Angelica, Master-wort, of each half a pound, roots of Zedoary, the lesser Galingal, of each an ounce, leaves of Mistletoe of Apple-trees, Rue, Sage, Betony, of each four handfuls, the outward coats of ten Oranges and eight Lemmons, Cardamums, Cloves, Nutmegs, of each half an ounce; all being slic'd and bruised, pour to them of White-wine (in which two pounds of Peacocks dung hath been infused for a day) ten pounds: let there be a close infusion for three dayes, then distill it according to art, let the whole Liquor be mixt.

Take species Diambræ two drams, powder of the roots of male Peony, choice Zedoary of each a dram and a half, Pearl a dram, Oyle of pure Amber half a dram, double refined Sugar dissolved in Peony Water, and boyled to a Consistency, for Tablets, six ounces, make Tablets according to art, weighing half a dram; let the Patient eat one or two often in a day at pleasure.

Within fifteen or twenty dayes, the Remedies, that they may be less loathsome and more advantageous ought to be changed; therefore instead of the Electuary, give for a fortnight or three weeks sometimes *Spirit of Sal Armoniack succinated, or coralliated, or impregnated with Mans*

Scull, or Caſtoreum; ſometimes the Elixir of Peony, *or the tincture of Amber, or Coral, or Quercitans Elixir of Life, mixtura ſimplex*: Alſo, inſtead of the compound Waters let them take either *the Water of black Cherries, or of Walnuts, or of Roſemary, or of Lavender ſimple*, ſometimes a draught of *Poſſet-drink with the Flowers of male* Peony, *or of Lillies of the Vallies boyled in it*, or a draught of *Tea or Coffee*, in the Morning (thoſe Ingredients being firſt boyled in the Water of which it is prepared) or let a *Confection of Chocolate* be made after this manner.

Take powder of the Roots of male Peony, *mans Scull prepared of each half an ounce, Species Diambræ two drams, make a* Powder, *to every paper of which add Cocao-nut-Kernels a pound, Sugar what ſuffices, make a Confection, let half an ounce or ſix drams of this be taken every Morning in a draught of a decoction of Sage, of* Peony *Flowers, or the like.*

Take Powder *of the Roots of male* Peony, *mans Scull prepared of each an ounce and a half, Roots of choice Zedoary, baſtard Dittany, Angelica, Contrayerva of each two drams, make a ſubtle* Powder *of all of them, add the yellow Coats of Oranges and Limons preſerv'd of each two ounces, let them be bruiſed together to a* Powder, *let about half a dram, or a dram be taken an Hour before and after meals.*

For ordinary Drink, let a Veſſel of four Gallons be filled with midling Ale, in which boyle the Leaves of white ſweet-ſmelling Hore-hound dryed ſix handfuls, Anacardiums, Cardamums, of each an ounce and a half, being ſlic'd and bruiſed, make a Bag.

But eſpecially, let an *exact form of Dyet* be obſerv'd: Let a temperate, dry, and well ventilated Air be choſen; let food only of an eaſie concoction, and light, be eaten; let the Supper be ſpare, or none at all; let ſleeping at noon, drinkings, and other ill accuſtomances about nonnatural things be ſhunned.

I might here inſtance ſeveral ſtories of Apoplectical perſons, *viz.* of ſome, who, tho ſeiz'd once or twice, are ſtill living; and of others kill'd by the firſt, or ſecond, or afterward at the third Invaſion. The Right Reverend Father in Chriſt, *Gilbert Lord Arch-biſhop of Canterbury*, lives ſtill, who eſcap'd above ſix years ſince from a ſevere Apoplectick fit, (God, to whom ever be praiſe, giving ſucceſs to Phyſical endeavours,) and from that time, tho he has now and then undergone light touches of the Diſeaſe, yet he has never been ſo proſtrated by it as to become ſpeechleſs, or inſenſible: But it's to no purpoſe to dwell long in ſetting forth this and other examples, in regard they contain nothing very rare, whence the *Ætiology* of the Diſeaſe may be illuſtrated. I have diſſected ſome dead Bodies, but they were in a manner only of ſuch Perſons as were ſeiz'd Apoplectical after the Head being greatly hurt, as by a ſtroke, or a fall, in all which the Blood extravaſated, or an Abſceſs was the cauſe of Death: As to the opening of Perſons dead of an habitual Apoplexy, we are moſt commonly hindred by Friends, who expecting their revival, both delay the

the Interrment, and wholly forbid Anatomy. But I ſhall give you here one notable Anatomical Obſervation made about five years ſince at *Oxford*.

An ancient Divine, an honeſt and pious man, of a groſs Body, and having a ſhort and full grown Neck, being long ill-diſpos'd in his health, and leading a ſedentary life, had contracted a very Scorbutick *Cacochymia*; being affected with a difficult and purſy breathing, and with an unwonted heavineſs and drowſineſs of his Head, he was ſcarce able to perform any thing of labour or exerciſe, but to go and come daily from his Chamber to the Chappel, and Refectory: On a certain morning, entring the Chappel a little before Prayers, as he ſet himſelf on his knees, being ſtruck on a ſudden, and preſently becoming ſpeechleſs and inſenſible, he fell on the ground; but being forthwith rais'd up, and his Cloaths taken off, he was put into a warm Bed: My ſelf and other Phyſicians being call'd, and coming as quick as might be, we found him not only without Sence, Pulſe and Reſpiration, but cold and abſolutely ſtiff throughout his whole Body: Nor could he be brought to life, or to a heat by any Remedies, or ways of adminiſtration, tho applied with all diligence for ſome time: Whence we imagin'd, that from his firſt being ſtruck, the beat of the Heart was wholly ſtopp'd, and its flame being extinct, that preſently all motion of the Blood was ſuppreſſed.

The next day after we opened the Body, it appearing to be quite dead and ſtiff; nothing doubting but very clear footſtepts of an affect ſo ſuddenly mortal, left within the Brain, would ſhew themſelves to the eye; but neither there, or in any other part, was there remaining ſo much as any ſhadow of the Diſeaſe, tho very violent: the veſſels irrigating the *Meninges* were indifferently fill'd with blood, but without any inflammation or extravaſation: the Brain, *Cerebellum*, and *medulla oblongata*, with all their proceſſes and prominences, appear'd every where firm and well-coloured throughout, both within and without: neither was there *Serum* nor extravaſated Blood heapt together any where within their Pores and Paſſages, nor alſo within the greater Ventricles: nay, and the *plexus chorocides* plac'd both within the Cavity of the Brain, and behind the *Cerebellum*, ſeemed free from all fault, ſo that the morbifick matter being as fine and ſubtle as the Spirits which it affected, remained wholly inconſpicuous, and we could only argue its preſence there from the effect.

Nevertheleſs, leſt it ſhould lye hid elſewhere without the Head, after having accurately inſpected all the Contents of the Brain, we came to the Thorax, where the Lungs being diſcoloured, and ſtufft throughout with a frothy Ichor, ſhew'd manifeſtly enough the cauſe of the difficult and purſy breathing; but the Heart being ſound and firm enough, was wholly free from any obſtructions, or polipous concretions. Moreover, neither near it, nor in other adjacent *Viſcera*

was

was any Abſceſs or Impoſtume found, by whoſe contact or ill favour the Heart could ſo be oppreſt, or the Vital Spirit (in caſe this be poſſible) on a ſudden be ſuffocated.

Wherefore in this caſe we could imagine nothing elſe, but that the Animal Spirits reſiding within the middle of the Brain were on a ſudden put to flight, and extinguiſh'd as it were by certain malignant, or narcotick, or otherwiſe infeſting Particles; ſo that the motion of the Heart, as of the firſt mover in a machine, failing on a ſudden, preſently all the other Functions, their impulſes being taken away, wholly ceas'd.

CHAP. VIII.

Inſtructions and Preſcripts for curing the Palſey.

THE middle of the Brain, or the *Corpus calloſum*, where we have aſſign'd the Seats of the *Vertigo* and *Apoplexy*, ſeems alſo to be the place primarily affected in the *Epilepſy*; but of this, as alſo of *convulſive Diſeaſes*, we have treated elſewhere: wherefore let us deſcend to other lower Regions of the Brain, and its Appendix, and next let us deſcribe the affects that belong to the *Corpora ſtriata*, *medulla oblongata*, and alſo to the nerves and nervous Fibres.

Theſe Parts execute all the Functions that regard motion and ſenſe, wherefore the failings or enormities of theſe muſt be affects of thoſe Bodies, or of the Spirits reſiding in them: now ſenſe and motion are injur'd chiefly two ways; for both are wont to be perverted, or ſtopped; when motion is perverted, Cramps and Convulſions; when Senſe, pains ariſe; when either Function or both of them together are letted or aboliſh'd, the Affect thence rais'd is call'd the *Palſey*; of which we muſt treat at preſent.

The *Palſey* is deſcribed after this manner, viz. *That it is a Reſolution, or Relaxation of the Nervous parts from their due Tention; by reaſon of which Motion and Senſe, to wit, either one of them alone, or both of them together cannot be exerciſed in the whole Body, or in certain parts of it after a due manner.*

The Nervous Parts are reſolved becauſe the animal Spirits doe not ſufficientiy irradiate, raiſe, and actuate them with vigour: The cauſe of which defect is, either an obſtruction of the *Ductus's*, whereby their paſſage or conveyance is hindred; or an impotency of the Animal Spirits,

rits, inaſmuch as being affected with a ſtupefaction, or being but few, they do not diſplay themſelves vigorouſly enough: By reaſon of theſe various ways of affecting, divers kinds of the Palſey ariſe: For firſt, as to motion by it ſelf, this ſpontaneous faculty (which chiefly, and in a manner only, is obnoxious to the Palſey) ſometimes in the whole Body, or in certain parts, is wholly aboliſh'd; but ſometimes it being only letted, is diminiſh'd or deprav'd. Secondly, in like manner we obſerve as to Senſe by it ſelf, that either one Senſe, or many together, ſometimes wholly are taken away, and that ſometimes they are very much diminiſhed or vitiated. Thirdly, ſometimes it happens that both powers are injur'd together; we ſhall ſpeak of each of theſe in order, and in the firſt place of the *Palſey*, in which ſpontaneous motion is aboliſhed; which we conclude to happen chiefly for two cauſes, to wit, by reaſon of the *Ductus*'s being obſtructed, or of the Animal Spirits being ſtruck with a ſtupefaction, or, as it were, with a certain malignant blaſt.

As to the former, the Interception of the Spirits from the Parts reſolved by reaſon of the Pores being obſtructed, it being always above the Parts, is wont to happen in various places, and for divers cauſes; but eſpecially either in the *primum ſenſorium*, *viz.* in the *Corpora Striata*, or ſomewhere about the *Caudices Medullares*; or laſtly, in the Nerves themſelves; and ſo lightly it happens either in their origines, or in the middle of their Proceſſes, or in their extream parts, *viz.* the Nervous Fibres. When the Injury happens to the *Corpora Striata*, or *Medulla oblongata*, or *Spinalis*, it either obſtructs the whole running of the marrow of the Back-bone, whence a *univerſal* Palſey ariſes beneath the place affected; or one half of it, whence a *Hemiplegia*: or it affects the heads of ſome certain Nerves either in one ſide, or in both together, whence reſolutions are caus'd in this or that member ſeparately from the others.

There are many ways, by which the paſſages of the Animal Spirits in the foreſaid bodies are obſtructed; *viz.* either, firſt, their *Ductus*'s are fill'd with an extraneous matter forc'd into them; or ſecondly, they are compreſs'd by extravaſated Blood, a glut of ſerous filth, or ſome tumour lying on them; or thirdly, there is a ſolution of their continuity, as by a wound, ſtroak, concuſſion, alſo by an exceſs of heat or cold.

As often as a *Univerſal* Palſey, or *Hemiplegia* (as is uſual) enſues upon a *Lethargy*, *Carus*, or *Apoplexy*, it is obvious to conceive that ſuch a change of the Diſeaſe happens by reaſon of the removal of the matter, *viz.* inaſmuch as this paſſing at length from the pores and paſſages of the *Corpus Calloſum* (which if firſt poſſeſt, and falling a little lower,) enters into the medullary tracts of one *Corpus Striatum*, or haply of both.

If

If it be askt why *Senſe* is not always hindred as well as *Motion* in the Palſey, ſince both are performed by the ſame Nerves and Fibres, and as it ſeems, within the ſame medullary tracts, ſo that one faculty is only the inverſion of the other; it ſeems here to be ſaid, that, as Light paſſes through Glaſs where the Wind is excluded, ſo alſo Senſe continuing entire, Motion often is aboliſht: Moreover, Senſe is only a Paſſion, and ſenſible impreſſion, which is propagated by the continuity of the nervous proceſs, from the Organ to the *ſenſorium commune*, without any effort or force of the Spirits, which might be done, tho the *Senſorium Commune* be ſomewhere obſtructed, and the Spirits reſiding in it are grown dull; But Motion is a difficult and laborious Action, to which it is required that the Spirits diſplay themſelves vigorouſly, and make as it were exploſive affects, not only in the moving Organs, but eſpecially about the parts where the principle of Motion and its firſt *Impetus* is, alſo in the whole paſſage through the Nervous parts. Wherefore, whereas a few Spirits, and thoſe diſabled, ſuffice for Senſe, many are required for Motion, and thoſe free and prompt as to their Expanſions.

I have obſerved in many that when they were firſt affected with an Indiſpoſition of the Brain, a Dulneſs of the Mind, and a Forgetfulneſs; and afterward with a Stupidity and Dotiſhneſs, they fell afterward (as I was wont to predict) into a Palſey; viz. the morbifick matter being fallen by degrees, and at length heap'd together to an opilative plenitude ſomewhere within the *Caudex Medullaris*, where the medullary Tracts are more ſtraitned than in the *Corpus Striatum*.

What before we ſaid in the Apoplexy, we affirm now in the Palſey, that the morbid Particles are not only opilative, but ſometimes narcotick, and extinguiſh the Spirits; thus the ſteams of *Antimony*, *Mercury*, and *Auripigment*, cauſe weakneſſes, tremblings, and often, reſolutions of the Members to ſome uſing amongſt furnaces of Metals. In like manner we may imagine, that in certain ſcorbutical and very cacochymical Perſons, heterogeneous Particles, and ſeemingly of a vitriolick nature, enter the *Ductus*'s of the Nerves, and ſubvert certain files of the Spirits, or ſuppreſs their motion; hence ſtupors or reſolutions ſuddenly ariſe in the Members or Muſcles, ſometimes in theſe, and ſometimes in thoſe, they often removing from place to place, and ſometimes a fixt Palſey is ſettled: And in every Palſey cauſed by obſtruction, the morbifick matter is not a groſs and viſcous phlegm, (as *Galen* and many Phyſicians affirm) for ſuch does not pervade the Brain, much leſs the *Ductus's* of the Nerves; but ſeems to conſiſt of ſubtle and very active particles, tho injurious to the animal œconomy, for the *Palſey* happens to men, as a blight or ruſt does to Plants; for ſome Winds endued with Vapours more than cold, viz. of a vitious or vitriolick Spirit, when they blow upon young tender Plants preſently cauſe them to wither; viz. in as much as the tender *ſtamina* interwoven every where like Nerves in the Leaves and Branches

are

are ſo throughly conſtring'd by the blaſt of the malignant Air, that they no longer admit the Juice ſent from the Trunk and Root, through defect of which they wither: after the like manner extraneous, and as it were, vitriolick Particles admitted within the Organs of Senſe and Motion, in as much as at the ſame time they ſtop the Pores, and deject the animal Spirits, or reſtrain them from Motion, bring as it were a blaſt on the reſpective Parts.

As to the evident cauſes of an habitual Palſey, *viz.* through what occaſions thoſe that are diſpoſed to this Diſeaſe contract it ſooner, or being already ſeized with it, are more ſeverely troubled with it: I ſay all ſuch things make for this, which add to the vitiating of the Blood, alſo which fill the Brain, and its nervous Appendix, or raiſe ſuffuſions of a morbifick matter in it, thoſe things likewiſe which affect the Spirits with a Stupefaction, or diminiſh their Stores: in the number of theſe firſt occur diſorders in the ſix non-natural things, an ill form of Dyet, a drinking of ſtrong Wines, or hot Waters, too much or unſeaſonable Sleep, Idleneſs, and a ſedentary Life, immoderate Venery, too great loſſes of Blood, a moiſt and marſhy Air, houſes freſh plaiſtred, metallick Fumes and Vapours, frequent uſe of Narcoticks, or Tobacco, an exceſs of Cold, Heat, or Moiſture, vehement and long continued Paſſions of Sadneſs and Fear, with many other things, which I ſhall not here ſtand to relate.

There is another kind of this Diſeaſe depending on the ſcarcity and fewneſs of the Spirits, in which tho motion fails wholly in no Part or Member, yet it is performed but weakly only, or depravedly by any: to wit, the affected, tho not become without Motion, yet they are not able to move their Members, or to ſuſtain any Burthen with ſtrength; moreover in any moving effort they are troubled with a trembling of the Limbs, which is only the effect of Weakneſs, or a broken ſtrength in the moving Faculty.

Perſons become ſubject to this affect by reaſon of an extream or valetudinary old age, alſo through immoderate loſſes of Blood or Seed; and likewiſe by reaſon of being very ſcorbutical, or cacochymical: and many recovering with difficulty and ſlowly from a chronick diſtemper are troubled with a languiſhing of the Limbs, and a great reſolution of the Members from their due Vigour and Strength; ſo that tho their Stomack holds good, and their Pulſe and Urine be well diſpoſed, yet being enervated, as it were, and without Strength, they ſcarce dare to ſet upon any local motion, and if they begin it, they cannot hold it long: nay ſome, without any conſiderable ſickneſs, keep their Beds for a long time, as Perſons ready to dye; whilſt they lye undiſturbed they diſcourſe with their Friends, and are chearful, but they neither will, nor dare be raiſed up, or walk about, nay they abhor all motion as ſome dreadful thing. Doubtleſs in theſe, tho the animal ſpirits in ſome ſort actuate and irradiate the whole *Genus Nervoſum*;

voſum; yet their Stores are ſo ſlender and looſly ſet together, that when many Spirits ought to be gathered together ſomewhere in it for motion, there is great danger leſt preſently in the Neighbourhood their Continuity be broken off, and conſequently the tenſion in the Nervous Parts be eſolv'd. Wherefore, in regard the Spirits reſiding in the Brain are conſcious of the Weakneſs of the others plac'd in the Members, they refuſe to impoſe local motion on their Companions, as being a task too difficult for them; for which cauſe the affected are ſcarce led by any perſwaſion to try whether they are able to go or not: but thoſe who being troubled with a ſcarcity of Spirits, will force them as much as they may to local Motions, are able at their firſt riſing in the Morning to walk, move their Arms this way and that, or to lift up a weight with ſtrength; but before Noon the ſtore of the Spirits which influenc'd the Muſcles being almoſt ſpent, they are ſcarce able to move Hand or Foot. I have now a prudent and honeſt Woman in cure, who for many years has been obnoxious to this kind of baſtard Palſey, not only in the Limbs, but likewiſe in her Tongue; This Perſon for ſome time ſpeaks freely and readily enough, but after long, haſty, or laborous ſpeaking, preſently ſhe becomes as mute as a fiſh, and cannot bring forth a word, nay, and does not recover the uſe of her Voice till after an hour or two.

In a certain ſpecies of the *Palſey* the ſenſitive faculty is hurt by it ſelf, motion being ſtill entire; this is obvious enough concerning the Organs whoſe Nerves are only relating to Senſe, as of the Sight, Hearing, Taſt, and Smell, and the Reaſon is plain enough. But that in the uttermoſt habit of the Body, or the Members, ſometimes the touch periſhes, the locomotive Power being without hurt; as it is every where ſeen in Perſons affected with the Leproſie, *Elephantiaſis*, and in ſome troubled with the *Mania* who are wont to go naked, and to lye on the Ground, and who are become ſo inſenſible in the Skin and the Fleſh of the Muſcles, that they do not feel the cuts of a Penknife, or Needles any where thruſt into them. This I ſay is very difficult to be explained; But concerning this it muſt be ſaid, that the ſame Nerves haply convey forward and backward the inſtincts of Motions, and the Impreſſions of ſenſible things; but that the ſame Fibres which are locomotive are not alway, or chiefly ſenſible: We have ſhewn elſewhere that the muſcular and tendinous Fibers execute the former Power, but the ſenſible Species is received in a manner only by the membranous Fibres; wherefore the outward Skin is the primary Organ of the touch; after this the Membranes that cover the Muſcles, and laſtly, thoſe that compoſe the *Viſcera* are in the ſame ſort affected by the tangible Object, wherefore the hurt or loſs of the touch happens by reaſon of an Injury offered the outward Membranes; viz. when the Fibres of theſe are obſtructed with a Vitriolick Matter, or are very much conſtipated by an exceſs of Cold, ſo that the animal Spirits which ought

ought to receive their Impreſſions, are excluded from their Organs, and that theſe Inhabitants of the outward Members are only affected it thence appears, becauſe the Members deprived of Senſe do not wither as thoſe deprived of Motion, but continue full and fleſhy; which is a ſign that the animal Spirits ſtill entring the Nerves and carneous Fibres give their vertue to the Function of Nutrition: but when Motion being aboliſh'd, the Spirits are in a manner wholly baniſh'd from thoſe parts, the Fleſh withers away, becauſe the nutritive Matter tho brought to them by the Arteries, is not aſſimilated.

As to the Prognoſtick of the *Palſey*, 1. Any *Palſey* that happens, the knowing and vital faculties being unhurt, ought not to be judged an acute Diſeaſe; but being free from ſudden danger, admits of a cure at long run, or at leaſtwiſe of an endeavour for it.

2. This diſeaſe hapning through an evident cauſe alone, as by a ſtroke, a fall from an high Place, a wound, *&c.* or coming upon an *Apoplexy*, *Carus*, *Convulſion*, *Colick*, or other affects of the Brain, or *Syſtema Nervoſum*, if it be not altered for the better, or yeilds to Medicines in in a ſhort time, for the moſt part proves incurable.

3. If upon the origine of the *medulla oblongata* being wholly obſtructed, or through the *Spine's* being vehemently hurt, a total reſolution follows and takes away Senſe and Motion, the affect is cured with difficulty, or ſcarce at all.

4. A *Palſey* hapning to men that are Aged, Cacochymical, greatly Scorbutical, or intemperate, tho the affect be not great, is cur'd with difficulty.

As the Types of the *Palſey* are many fold, and its cauſes divers, ſo its cure ought to be undertaken not always after one manner, but by a various method, *viz.* appropriate to each ſpecies of that Diſeaſe: for the moſt part there will be theſe three kinds of it, or rather there will be three wayes of healing, whereof ſometimes this, ſometimes that, or the other, ought to be entred upon in order to the cure of this Diſeaſe, to wit, according as the reſolution (of what kind ſoever, and in what place ſoever it be) is either firſt cauſed on a ſudden by an outward accident, *viz.* a ſtroke, a fall from an high Place, a wound, an exceſs of cold, or the like; or ſecondly, ſucceeds ſome other affect, *viz.* The *Apoplexy*, *Carus*, *Colick*, or a long continued *Fever*; or thirdly, being a Diſeaſe primarily, and of it ſelf, depending of a *Procatarxis*, or previous *apparatus*, is raiſed by degrees: we ſhall ſpeak of each of theſe particularly.

1. When therefore a *Palſey* is cauſed by reaſon of ſome accident, with a violent hurt, there will not be many Intentions of curing, but only that the part injured may recover its ancient confirmation; and firſt, leſt the Blood and other humours flowing to it, as being affected and weak, and there ſtaying, increaſe the evil, let Phlebotomy, which moſt commonly is requiſite in this caſe, be preſently put in

practice; afterward a thin dyet, if the case requires it, or a dyet of easie concoction being ordered, we must insist chiefly on moderate Hydroticks; to wit, that whilst the diseased, put to bed, is kept in a gentle sweat, all sorts of Superfluities withdrawn from the part injured may plentifully exhale, and that the Spirits being gently agitated within the Pores and Passages of it, so opened by the warm *effluvia*, may recover their former Paths and Tracts.

For this end, let the *Powder for a fall*, described in the *Pharmacopœa Augustana be given to the quantity of about a dram in a draught of White-wine, or of Posset-drink made with it, (it being usual amongst us to give to the like quantity of Irish-slat,) and let it be repeated every six or eight Hours: Moreover let a Traumatick Decoction, if it may readily be had, either of the Roots of Madder, or Butter-burr, or of the Flowers of St. Johns wort in Posset-drink be frequently given.*

Moreover, let the place affected in the mean time be diligently search'd after, which will easily be known, partly from the hurt inflicted on it, and partly from the member resolv'd. If any thing be dislocated in it, we must endeavour that it be presently put in its place: If a *tumour*, *contusion*, or *wound* be made, let relief be given them by *balsams*, *liniments*, *fomentations*, or *cataplasms*: But if nothing preternatural appears outwardly, let as much as suffices of the *Oxycroceum* and *Red Lead* Plaisters, mixed together in an equal quantity, be applied to the part hurt, and let the Diseased be kept at rest, and in a moderate warmth for three or four days: if the resolution continues obstinate, and an afflux of new matter be not feared, let more resolving and discussing Remedies be applied about the places affected; wherefore let *fomentations*, and hot *liniments*, nay, and natural hot Baths, if it be convenient, or at leastwise artificial ones, be used: Sometimes it is good to put the members affected in *warm Horse-dung, or Grains*, and to keep them there for some time: and now and then to interlace Clysters and gentle Purges with the use of these things. But if no relief follows these Administrations, this affect ought afterward to be handled with the like Method, and the same Remedies with which an habitual Palsey, or any other that is confirmed, or follows upon other Diseases is dealt with: which way of cure we shall give you beneath, in regard it is common to every Palsey deeply rooted.

2. When a *Palsey*, hapning upon a *Fever*, *Apoplexy*, *Carus*, or other *Cephalick* or *Convulsive* affects is great, and comes on a sudden; we must chiefly use a Physical means for the removal of its *Conjunct cause*, which has its seat in a manner always in the *Medulla oblongata*, or *Spinalis*: Wherefore in the beginning of the Disease let *Blooding* and *Purging* (if nothing indicates the contrary) *Clysters*, *Vesicatories*, *Cupping-glasses*, *Sneezers*, *Liniments*, and other administrations usual in Cephalick Diseases, *viz.* such as some way drive out, or withdraw

draw the morbid matter ſticking in the *Caudex Medullaris*, or the little Heads of the Nerves proceeding from it, be us'd: And if the firſt effort of Phyſick does nothing within fifteen or twenty days, the affect afterward, in regard it is firmly rooted, and become habitual, is to be overcome by a long method, and by *Preſervatory*, as well as *Curatory Indications*; of which we ſhall preſently ſpeak.

3. An *Habitual* Palſey, depending of a *Procatarxis*, is either in *fieri*, or in its diſpoſition, or *in facto*, or in its habit; both require a peculiar way of Cure.

Of the former there are two chief caſes, in both of which the *Therapeutick method*, regarding only the *Procatarctick cauſes*, is ordered after the like manner: to wit, whether any Perſon be in danger of being ſeiz'd with the *Palſey*, or recovering from it, be in hazard of a relapſe, we muſt inſiſt in a manner on the ſame Medicines.

Therefore the *Intentions of Curing* muſt be, firſt, that the functions of *Chylification* and *Sanguification* being duly perform'd, a laudable matter for the generation of Animal Spirits be ſent to the Brain in a ſufficient plenty: and then, ſecondly, that the Brain being ſtill firm and of a due conformation, admits into it, and duly exalts into Animal Spirits all apt particles, excluding ſuch as are heterogeneous; for theſe ends we have thought good to propoſe the following method, which ought to be varied according to the various conſtitutions of the Diſeaſed.

Spring and Fall, let ſolemn courſes of Phyſick be entred upon, nay, and the whole year beſides, let ſome Remedies be conſtantly uſed: *Bleeding* is not generally proper for all Perſons: and if we forbid this, it is not for the ſame reaſon with the Ancients, ſuppoſing the *Palſey* to be a *cold Diſeaſe*; but becauſe the Animal Spirits are both engendred from the Blood, and become elaſtick within the moving Fibres, by reaſon of a ſanguineous combination; therefore if the ſtore of this be leſſened too much, they will fail and flag. Which truly I have obſerved in many, and that for the moſt part in the Arm, from which the Blood was drawn, languiſhings and tremblings have begun. Nevertheleſs, a ſpare and moderate *Bleeding* ſometimes agrees with ſome that are endued with a Blood that is hot and ſharp, and apt to too great effervescencies, tho they are diſpoſed to the *Palſey*.

About the *Equinoxes*, *purging* ought to be ordered, and to be repeated by due Intervals three or four times; but in the firſt place let a *Vomit*, if nothing indicates the contrary, be given of *Salt of Vitriol*, *Sulphur of Antimony*, *or an Infuſion of crocus metallorum*, *or Mercurius vitæ*; afterward let *Pillulæ de ſuccino* or *Aloephangine* be taken by themſelves, or with *Roſin of Jalap*, every ſeventh or eighth day: At other times let *Cephalick Remedies*, ſuch as we have preſcribed for the *ſleepy affects*, viz. *Electuaries*, *Powders*, *Spirits* and *volatile Salts*, *Tinctures*, *Eli-*

Elixirs, with *diſtill'd Waters* or *Apozemes*, viz. ſometimes theſe, ſometimes thoſe, or others be frequently uſed. Let *Iſſues* be burnt in the *Arm* or *Leg*, nay, in groſs and cachectical Perſons together in both, or near the *Shoulder-blades*. Let a Phyſick-drink of *Sage*, *Betony*, *Stœchas*, the *wood Saſſafras*, *Winters bark* &c. be drank the whole year. *Wine* and *Venus* ought either to be forbidden, or to be allowed only ſparingly.

But if the *Palſey*, after a previous diſpoſition in the whole, or in one ſide, or in certain members, throughly ſeiſes, and, notwithſtanding the firſt encounter of Phyſick, comes on again; for its cure *a long and complicated method*, which is alwayes requiſite, often times does not ſuffice; for not only the Diſeaſe, or its conjunct or procatarctick Cauſe ſeverally, but all together, muſt be aſſaulted: for which ends, *blooding* for the moſt part being forbidden, only *a gentle purge*, and that but now and then, is proper. Again, and indeed chiefly, againſt the *Procataxis* of the Diſeaſe, Cephalick and Antiſcorbutick Medicines are wont to do good: but not all of theſe kinds agree with all Perſons, but, as we have obſerved in the Scurvey, according to the various Conſtitutions of the Diſeas'd, the Remedies alſo muſt be of a differing kind and vertue: for with *bilous paralyticks*, in whoſe ſharp and hot blood there is much *Salt* and *Sulphur*, and very little *Serum*, hot Medicines, and ſuch as are endowed with very active Particles, do not agree, nay often prove offenſive to them; which nevertheleſs prove greatly beneficial to *phlegmatick perſons*, whoſe blood is colder and contains a great deal of *Serum*, and a few active Elements. Wherefore, according to this *two-fold* ſtate of the Diſeaſed, it ſeems fit for us to propoſe here a double method of Cure, and two Claſſes of Medicines, whereof this will do well to be given to *cold paralyticks*, and the other to ſuch as are *hot*.

In the former caſe, for the removal of the *procatarctick Cauſe*, after a *Vomit* and a *Purge* duely ordered, I adviſe to be preſcribed according to the following forms.

Take Conſerve of the leaves of Garden Scurvy-graſs, and of Rochet made with an equal part of Sugar, of each three ounces, Ginger condited in the Indies an ounce, the yellow coats of Oranges and Limons preſerv'd of each ſix drams, powder of the Claws and Eyes of Crabs of each four Scruples, ſpecies diambræ two drams, winters-bark a dram and a half, roots of Zedoary, the leſſer Galingal, Cubebs, the ſeeds of Garden-creſſes, rochet, of each a dram, Spirit of Scurvy-graſs, and of Lavender, of each two drams, Syrup of the conditure of Ginger what ſuffices, make an Electuary: Let the quantity of a Walnut be taken at eight a clock in the Morning, and at five in the Afternoon, drinking after it a pound of the following decoction, or ſix ounces of the Tincture of Coffee, with the Leaves of Sage boyled in it, or three ounces of Viper-wine.

Take

Take Raſpings of Guaiacum ſix ounces, Sarzaparilla, Saſſafras of each four ounces, red and yellow Saunders, ſhavings of Ivory and Harts-horn of each half an ounce, infuſe them according to art, and boyle them in ſixteen pounds of fountain-Water, to a half, adding Crude Antimony, powdred and tyed in a Nodulus, four ounces, roots of Calamus Aromaticus, the leſſer Galingal of each half an ounce, Florentine Orris an ounce, Cardamum ſix drams, Coriander ſeeds half an ounce, ſix Dates, make a Decoction, and let it be uſed for ordinary drink.

Going to Bed, and early in the Morning, let a doſe be taken either of the Spirit of Soot, or of Harts-horn, of Sal Armoniack ſuccinated, of Blood, &c. with three ounces of the following diſtilled Water.

Take of the Leaves or Roots of Aron a pound, Leaves of Garden Scurvy-graſs, the greater Rochet, Roſemary, Sage, Savory, Time, four handfuls, Flowers of Lavender three handfuls, the outward rinds of ten Oranges and ſix Limons, Winters bark three Ounces, Roots of the leſſer Galingal, Calamus Aromaticus, Florentine Orris of each two ounces, Cubebs, Cloves, Nutmegs, of each an ounce, all being ſlic'd and bruiſed, pour to them of White-wine and Brunſwick Beer of each four pounds, let them be diſtilled with common Organs, and let the whole Liquour be mixt.

Sometimes inſtead of the Electuary, for fifteen or twenty dayes let a doſe of the Tincture of Sulphur terebinthinated, or the Tincture of Antimony, or of Amber: ſometimes alſo let the Elixir Proprietatis, or of Peony be taken in a ſpoonful of the diſtilled Water, drinking after it three ounces of the ſame.

Sometimes alſo let the following *Powders* or *Tablets* have their turns in the courſe of Phyſick.

Take powder of Vipers Fleſh prepar'd at Montpellier an ounce, Hearts and Livers of the ſame half an ounce, Species Diambræ two ounces, make a Powder, let a dram be taken twice a day, with three ounces of the diſtilled Water, or with Viper Wine, with a decoction of the Leaves of Sage, of the Roots and Seeds of the great Bur-dock, and Eringo roots condited made in a ſufficient quantity of Fountain-Water to a half, to the quantity of ſix or eight ounces warm in the morning, expecting a ſweat.

Take Solar Mineral Bezoar half an ounce, Cloves powdred two drams, mix them, make a powder, to be divided into twelve parts; let one part be taken twice a day after the ſame manner; with the uſe of theſe kinds of Remedies, let gentle Cathartick's be pretty often interlac'd.

Take powder of choice Roots of Zedoary, and the leſſer Galingal of each a dram and a half, Species Diambræ a dram, powder of the Seeds of Muſtard, Rochet, Scurvy-graſs, Water-creſſes, of each half a dram, make a ſubtle powder of all: add pure Oyle of Amber half a dram, with ſix ounces of white Sugar diſſolved in compound Peony Water, and boyled to a Conſiſtency for Tablets, make Tablets according to Art, each weighing half a dram, let three or four be eaten twice a day, drinking after it a doſe of ſome one of the Liquors even now mentioned.

Take

Take powder of the roots of Virginia Serpentary two drams, of the lesser Galingal a dram, of the Gummous extract from the residency of the distillation of Quercitans Elixir of Life a dram, Flowers of Sal Armoniack (or of pure volatile salt of Soot, or of Harts-horn) a dram, Balsam of Peru a scruple, Balsamum Capivi what suffises, make a Mass, let it be made into little Pills, rowling them in species Diambræ, the dose is half a dram evening and morning. (or)

Take Rosin, or Gum of Guaiacum three drams, species Diambræ a dram, Chymical Oyle of Guaiacum excellently rectified a dram and a half, liquid Amber what suffices, make a mass, let it be formed into Pills, to be taken after the same manner.

But if a *Palsey*, hapning in a bilous Temperament, or in young Persons, admits only mild Medicines, being wont to be exaspirated by any that are hot and elastick, the following forms will be of use for removing its *Procatarxis*.

Take Conserve of the Flowers of Betony, Fumitory, Primrose Flowers of each two ounces, species Diambræ a dram, Ivory, Crabs Eyes, Crabs Claws of each four scruples, Powder of Peony Flowers two drams, Lignum Aloes, yellow Saunders, of each a dram, Salt of Wormwood, a dram and a half, with a sufficient quantity of Syrup of Peony Flowers make an Electuary, the dose is two drams a day, drinking after it either of the simple Water of the Leaves of Aron, or of the following compound Water three ounces, or of a Decoction of Sage, with the Leaves of Tea infused in it four or six Ounces.

Take Rots of Aron, male Peony, Angelica, Masterwort, of each half a pound, Leaves of Sage, Rosemary, Marjoram, Bocklimes, Water-cresses of each four handfuls, the Flowers of Primroses, Cowslips, Marygolds, of each three handfuls, the yellow coats of six Oranges, and four Limons, all being slic'd and bruised pour to them of new Milk six pounds, Malaga-wine two pounds, distill them with common Organs, let the whole Liquour be mixt.

Instead of the Electuary sometimes for fourteen or fifteen dayes, let the use of the Syrup of Steel be interlaced, wherefore let a spoonful be taken in three ounces of the distilled Water, it may be made after this manner. Take double refined Sugar dissolved in black Cherry Water, and boyled to a Consistency for Tablets eight ounces, adding of our Steel powdred three drams; let them be stirred together on the Fire, and then pour to them by degrees, Rosemary Water warmed twelve ounces, let them seeth gently for a quarter of an hour, taking off the froth, and pour it out warm through a hair Strainer.

Chalybeat Tablets also may be made after this manner; viz. *To the Sugar sufficiently boyled with the Steel add Oyle of Amber, or Chymical Oyle of Rosemary half a dram, and presently pour it forth that it may run abroad into a Consistency for Tablets, the dose is two drams twice a day, drinking after it of the distilled Water, or of the following Apozeme six ounces.*

Take

Take China Roots an ounce, ſhavings of Ivory and Harts-horn of each half an ounce, white and yellow Saunders, Maſtick-wood of each half an ounce, let there be a warm and cloſe infuſion for a Night, in ſix pounds of Fountain-water, in the Morning add Roots of Chervil, Avens, Butchers-broom, ſtone-Parſley of each an ounce and a half, dryed Leaves of Ground-Ivy, Sage, Germander, Betony, of each a handful, Coriander Seeds three drams, let them boyle to a half, then add of White-wine half a pound, and ſtrain it into a Bottle on two handfuls of Leaves of Water-creſſes bruiſed: make a warm and cloſe infuſion for two hours, ſtrain it again, and keep it in a ſtopt Veſſel.

In a ſcorbutick Palſey *Juices and Expreſſions of Herbs* often give an excellent relief.

Take freſh Leaves of Brooklimes, Water-creſſes, Plantain, of each four handfuls, being bruiſed together, pour to them of the diſtilled Water even now deſcribed eight ounces, expreſs it ſtrongly, keep it in a Glaſs, and let three or four ounces be given twice or thrice a day.

At the earlieſt and lateſt phyſical Hours, viz. *in the Evening and early in the Morning*, let the following *Pills* be taken.

Take Millepedes prepared three drams and a half, Pearl a dram and a half, Roots of baſtard Dittany a dram, Venice Turpentine what ſuffiſes, make a maſs, form it into ſmall Pills, the doſe is half a dram, drinking after it a little draught of the diſtilled water.

For ordinary drink let either a Bochet be preſcribed of Sarſa, China, yellow Saunders, &c. or ſmall Ale, with the dryed Leaves of Ground-Ivy boyled in it, and of Sage, with the wood Saſſafras infuſed.

While theſe things are done for removing the *Procatarxis* of the Diſeaſe, no leſs a curatory endeavour is required for its *conjunct Cauſe*, viz. that any places obſtructed, being again opened, may admit and give a free paſſage to the animal Spirits, freed from ſtupefaction.

There are *two* chief kinds of Remedies which conduce much for theſe ends; viz. the one *particular* and *ſpecial*, to be applied to the Places affected, to wit, that by *Fomentations, Liniments, Plaiſters, and* other outward Applications the ſtupified Spirits may be raiſed up again, and their Ductus's be opened: the other *univerſal*, to wit, that the Blood and Spirits, and the other humours (and the active particles abounding in the whole Body) being very much agitated and put in a more rapid Motion, making as it were a ſwift current, may force from before them and remove damms, or Obſtacles any where ſticking, by which the Spirits are obſtructed.

The Adminiſtrations to be uſed to the outward Parts, are ſo generally and vulgarly known, that it would be ſuperfluous to inſiſt here in deſcribing them at large. Firſt, let *Liniments* of Oyles, Unguents, and Balſams, more or leſs hot according to the temperament of the diſeaſed, be applied twice a day with Frictions. Let Fomentations of a Decoction of Cephalick Herbs and Aromaticks in Fountain-wa-

ter be ſometimes us'd before theſe; adding ſometimes hot Waters, Wine or Beer, or their Lees: moreover, it is proper ſometimes to apply Veſicatories, Cupping-glaſſes, a Pication, or Urtication about the places affected. Bags, and Playſters oft do good. Again, if the caſe admits it, it is profitable for the reſolv'd Members to be put into Grains, or the Dregs of Grapes remaining after preſſing, or to be thruſt into the Belly or Thorax of a Beaſt freſh killed, or alſo be bath'd in an artificial Bath, or natural hot Baths, and to be kept in any of theſe for a long time.

But if theſe things do no good, we muſt come to the Univerſal or great Remedies: ſuch as chiefly are Diaphoreticks, Mercurials raiſing a Salivation, and ſtrong Vomitories: of each of which we ſhall ſpeak in ſhort.

There is no one of the Vulgar but every where obſerves that Diaphoreticks ſometimes do great good in the cure of the Palſey, and that ſometimes they prove very prejudicial. Wherefore it much concerns us that the reaſons of ſo different an effect ſhould be explicated; to the end that Indications may be thence taken concerning the uſe, or rejecting of them.

Therefore a copious ſweating is wont ſometimes to prove very advantageous to Paralyticks, chiefly for two reaſons; to wit, that it may plentifully drive forth the impurities of the Blood, and nervous Juice, which are apt to exhale, ſo that the morbifick Matter may no longer flow to the Brain, and the Parts affected, and that that which has already flown to them may in part be conveyed forth. And then ſecondly, that the *effluvia* of heat paſſing from the boyling Blood very much open the Ductus's of the Nerves before obſtructed, as they paſs through them in evaporating, and open wayes for the Spirits. Wherefore this Adminiſtration agrees chiefly and in a manner only with thoſe, whoſe Blood, being not filled with a fixt Salt and Sulphur, is diluted with a limpid and inſipid Serum: for on the contrary, Paralyticks, whoſe Blood and Humours are greatly ſtor'd with wild, Exotick, and fixt Particles of exorbitant Salts and Sulphurs, and ſuch as are unfit for exhaling, often receive a great damage from a ſweat violently raiſed, of which effect we aſſign theſe two Cauſes, to wit, that the morbifick Particles being too much exalted by reaſon of their Agitation, become more exorbitant: and then ſecondly, that being driven plentifully into the Brain, and *Genus Nervoſum*, they often increaſe the ancient Obſtructions, and not unfrequently produce new.

For raiſing a plentiful and eaſy Sweat, both inward Medicines and outward Adminiſtrations are wont to be uſed: the former ſtir the Blood or Serum to effervescencies, or ſtimulate the Heart to quicker Motions, and thence (whether one of them, or both be performed) when the Liquor of the Blood, being rapidly circulated through the Heart and Veſſels, is put into a frothy Turgeſcency, it cannot but diſcharge

diſcharge from it ſelf a great many *Effluvia*, which are the matter of Sweat: for this end Medicines of various kinds are recommended to Paralyticks, of which thoſe of chief note are, a *decoction of Guaiacum, Sarſaparilla*, &c. *Spirit, and Oyl of Guaiacum, mixtura ſimplex, Flowers and Spirit of Sal Armoniack, Aurum Diaphoreticum, Salt, Powder, and Wine of Vipers, mineral ſolar Bezoar, Tincture of Antimony*, &c.

Outward Adminiſtrations promote a Sweating, for as much as they raiſe and keep a moderate heat in the whole circumference of the Body, and then the Blood being heated, is forc'd to move more ſwiftly, and to evaporate more, and withall, the pores of the Skin being open'd, more readily let forth all Particles apt to exhale; for this end, beſides Bed-coverings (which only keep the *Effluvia* of heat emitted from the Body in its circumference) a Cradle likewiſe with Charcoal, or Spirit of Wine, kindled, a Hot-houſe, and Baths of various kinds and forms, and natural Hot Baths are wont to be uſed; but above all, our Hot Baths at *Bathe*, than which (if they agree well with the temperament of the Patient) no more excellent Remedy can be imagin'd, which is ſufficiently ſhewn by the Crutches of a great many Perſons cur'd of reſolved Members, hung up as ſo many Trophies of the Conqueſt of this Diſeaſe.

Nevertheleſs, as generous Medicines, if they do not prove *Alexipharmicks*, often paſs into Poyſons, ſo the uſe of hot Baths, when it has not cur'd ſome Paralyticks, has rendred them much worſe; ſo that more Members, and ſuch as were before affected, being more reſolv'd, there has been no other occaſion for the Diſeas'd for leaving their Crutches there, but that being rendred more weak they could uſe them no longer: we have hinted the cauſe of this before, to wit, that bathing exagitating the Blood and all the Humours, exalts more all Morbifick and heterogeneous Particles, and being rendred more exorbiant, drives them from the *Viſcera* into the Maſs of Blood: whence (in regard they cannot eaſily evaporate) entring the Brain, and *Genus Nervoſum*, they increaſe the Paralytick affect, and often bring a Convulſion with it: for this reaſon Bathing ſometimes firſt actuates a Nephritick, and Gouty Diſpoſition, moreover, it brings to many a Blood-ſpitting Aſthma, or Conſumption, where no Diſpoſition was; wherefore hot Baths ought not to be tryed without the adviſe of a Phyſician, and being try'd, if they ſeem not to agree, they ought ſoon to be left.

I have it ſufficiently confirmed both by my own Experience, and that of ſome other Phyſicians, that ſome Paralyticks are cured by a Salivation raiſed by *Mercury*, but I judge that this kind of Remedy is to be us'd only in an habitual Palſey, viz. which has a Procatarxis in the Blood and Brain readily enough to be moved, and a conjunct Cauſe in the nervous Appendix, which is not very fix'd: but when that affect is cauſed by an outward and great hurt, or happens upon a Carus, Apoplexy, or Convulſions, Salivation is attempted in a manner always in

vain, and sometimes not without a mighty Prejudice; and let not those who, having a weak or over-lax Brain, are frequently subject to a *Vertigo*, drowsiness, and convulsive Motions, use Mercurial Medicines inconsiderately. But sometimes a Salivation does mighty good in an habitual Palsey, and which is not very fix'd, for as much as by taking away the Impurities of the Blood, it cuts off all the fuel of the Disease; and in as much as some Mercurial Particles, whilst having past the Brain, they enter the *Ductus*'s of the Nerves, divide the Morbifick matter sticking in them, and severing its parts one from another, disperse them several ways, some forward and some backward. Whereas it is a common fault of other Medicines, that often they press forward only the damm that obstructs the ways of the Spirits, and therefore if they do not force it asunder, they drive it more firmly into the places obstructed.

And it is in some sort for this reason that Vomitories often do egregious service in Curing the Palsey: to wit, that they withdraw the fuel of the Conjunct Cause, and do not drive only forward the matter sticking in the Nerves, but revulse it, mightily shake it, and often break it into minute parts, so that when the Continuity of the damm is broken, the animal spirits themselves easily dissipate the Particles of the Morbifick matter severed from each other; we have intimated before another reason concerning the relief of Emeticks in the sleepy affects, which has also in some sort place in the Palsey.

So very many Examples and Instances of Paralyticks daily happen every where, that the various Types and Histories of them (if they were described) would fill a mighty Volume, wherefore I shall only set down here some of the more rare, *viz.* one or two, with which each chief species of that Disease may be illustrated, and since it would be to little or no purpose to give a Relation of Resolutions of Members hapning by reason of some outward Accident, as a fall from an high Place, a Wound, or a Stroke, I shall insist only in describing those Cases, where the Palsey arises either by it self after a previous Dispositon, or follows upon some other Disease.

Some time since, a certain Gentleman, Robust, well in Flesh, and above forty years of Age, having been in a manner always in health, at length giving himself to a sedentary Life and Idleness, and afterward becoming more dull than usual, refused any exercise and vigorous motion of the Body: moreover, being melancholy and sad, on any light occasion, nay, sometimes without any manifest cause, he was wont to break forth into a weeping and tears: this Person a short while after (which I have also observed of many others) was affected with a Weakness and a Trembling of all the Members, and afterward with a Resolution of the lower Parts, by which Disease (being melancholy and soon a weary of Physick)-yielding himself overcome, and growing weaker by degrees, he dyed within six months.

I remember many others, but eſpecially two committed to our care, being as to the firſt part of their Life mighty Ingenious, and well Learned, who afterward in their declining Age, partly by reaſon of a *Cacochymia* of the Body, and partly through a trouble of mind growing dull and forgetful, at length (notwithſtanding the uſe of Remedies in the beginning of the Diſeaſe) became Paralytical.

A young man of a ſanguine temperament, clear ſpirited, and for the moſt part Healthy, ſitting in a Chair after a plentiful Supper, and an immoderate Drinking of Wine, was ſo affected with a ſtupidity in his right Hand, that his Glove, which he happened to hold, fell down againſt his will; afterwards ſtanding up and endeavouring to go, he perceived a reſolution in the Leg and Thigh of the ſame ſide, falling a little afterward into a certain dulneſs of Mind, and a ſtupidneſs, tho without an Apoplexy, for he was always preſent to himſelf, anſwering aptly enough, tho ſlowly, and with ſome trouble, to things asked, and doing things that were commanded him; a very skilful Phyſician being preſently called, Blooding, Vomiting, Purging, were uſed in order, Cupping-Glaſſes, a Scarification, Liniments, Frictions, and other fit Adminiſtrations were diligently applyed: nevertheleſs the Palſey increas'd, ſo that beſides Motion almoſt taken away from the Members of the right ſide, he loſt alſo the ſight of that Eye: yet, tho dull and ſleepy, being ſtill *Compos mentis*, he knew his Friends, and being conſcious of his Infirmity, and ſollicitous for the recovery of his Health, he took all Remedies offered, but notwithſtanding this, the animal functions daily fail'd more and more, and through a conſent with them, at laſt the vital, ſo that about the ſeventh or eighth day falling ever and anon, ſometimes into a *Delirium*, ſometimes into Convulſions, and other diſtractions of the Spirits, at length his ſtrength being gone, he yielded to Death.

A *certain Noble-mans Bayliff*, about forty years of age, having a ſharp Blood and a bilous temperament, and long obnoxious to a *Vertigo*, as he rode through a certain Village in the Country, being ſeiz'd on a ſudden with a *Scotomia*, fell head-long on the ground; where being preſently taken up by the Inhabitants, and put to Bed, he lay for many hours inſenſible, and dead as it were; but afterward awaking, he found all the members of both ſides reſolv'd into a *Univerſal Palſey*: going to ſee him the next day after, I preſently drew about twelve ounces of Blood, and forthwith preſcribed other Remedies, both as to outward adminiſtrations, and inward Medicines to be diligently us'd, and indeed with good ſucceſs; for after five or ſix days he began to ſtreteh forth, or bend his feet, nay, to move them from their place this way and that, tho ſlowly; afterward, by the conſtant uſe of Remedies, he was able within two months to raiſe himſelf, ſtand on his feet, and go a little with Crutches, then having us'd at his houſe an artificial Bath for ſome time, he daily gain'd in the motion of his members,

members, and his ſtrength; at length, aſſoon as the ſeaſon of the year was fit, going to *Bathe*, and by the uſe of the *hot Baths* perfectly recovering within ſix weeks, he returned ſound, leaving there his *Crutches*.

The following Relation will manifeſtly ſhew that the Palſey does not only follow upon Cephalick affects, but alſo on the Colick and Scurvy.

A *handſome Woman*, and young, after Child-birth fell into a *Tertian Ague*, this afterward becoming a *Quotidian*, and the cure protracted, brought a very violent Cholick, and of long continuance. Pains firſt raged only in the *Abdomen*, with a vomiting and moſt bitter tortures: being long tormented, and almoſt worn away with theſe, at length ſhe began to be troubled with a ſtupor, and a ſenſe of pricking, ſuch as ariſes in members lain on. Nor was it long after but a *Palſey* (which that other affect very often fore-runs) followed in the whole Body. In this ſtate being brought to *Oxford*, ſhe was committed to our care; another famous Phyſician, D. *D. Lydall*, being called to joyn with me. Not only all the greater Members of this Diſeaſed, but even the leſſer of each Limb were ſo wholly reſolved, that ſhe was not able to ſtir from its place either Hand or Foot, or any finger of either hand. Moreover, ſhe was ſo far affected with an *Atrophia*, that the fleſh being wholly vaniſhed, the Skin ſcarce ſtuck to the Bones, yet ſhe ſtill had a good Pulſe and vivid Aſpect, from which alone we gathered ſomewhat of hope.

After that we had given this Perſon for many Weeks the choiceſt Medicines both *Antiparaliticks*, and *Antiſcorbuticks*, almoſt of every kind, and according to various Methods, without any ſucceſs, at length we propoſed to her ſelf and her Friends a Saliv'ation, as a Remedy more powerfull than any others, but withall dangerous: not deliberating long concerning this, they reſolve rather to try a doubtful Medicine than none, or which is the ſame, one wholly ineffectual. Therefore we gave her *Precipitatum ex Mercurio cum ſole* in a ſmall Doſe, and repeated it the next day after: on the third day, an eaſy and gentle Saliv'ation beginning, went on fairly for a Week without any malign Symptome; but then the Diſeaſed complaining of a great *Head-ach* and *Vertigo*, begun to be affected with Convulſive Motions, ſo that we were forced preſently to let fall the Saliv'ation, and to break off this Courſe as ſoon as we could, withdrawing the fluxion of the ſerous latex from the head towards the other parts, which frequent Clyſters, Epiſpaſtick and Revulſive Plaiſters applyed in various places, together with Cordials and Opiats inwardly given, ſoon effected: and preſently upon it the noble Lady being ſomewhat better, begun to ſtretch forth and bend the Joints of her Hands and Feet, and to move ſometimes thoſe members or theſe from their place, the Spitting ceaſing: being gently purged, ſhe took for many days a *decoction of China, Sarſa, red Saunders, Ivory, &c.* with the addition of the dryed *leaves of Sage, Betony*,

Betony, Speedwell, &c. with which ſhe was wont to interlace the uſe of *Spirit of Harts-horn, or of Soot, of a Cephalick and Cordiack confection*, alſo of an *appropriate Powder and Julep*: within a Months ſpace ſhe was able to ſtand on her Feet, and to walk a little in her Chamber being ſupported by Servants: moreover, getting Sleep, and taking Food indifferently, the bulk of her Fleſh and her ſtrength daily increas'd, and at length uſing the temperate *hot Baths* at *Bath* ſhe grew well.

But that *hot Baths* do not do good to all Paralyticks, nay (as we have intimated before) that they do great hurt to ſome, the following relation will plainly ſhew: A *London Merchant* after a Luxation of a Joynt of the Foot, became lame in that part, being otherwiſe ſound enough, and robuſt: when Topick Remedies of various kinds, tryed for ſome, time did not do, at length by the advice of a Phyſician going to *Bathe*, he began to try the temperate *hot Baths*, from the farther uſe of which (becoming forthwith worſe upon it, the *Palſey* preſently beginning in other Members) he had abſtained, but the Phyſician being then preſent, aſſuring him that he would be better afterward, adviſed him to perſiſt: wherefore he took the *hot Baths* again for about thirty dayes, till all the lower Members, to wit, from the *Os ſacrum* to the Feet being wholly reſolv'd, were withered, and that in the *Thorax* a very great and as it were Aſthmatical dyſpnæa was raiſed: for the Muſcles imployed in Reſpiration (being as it ſeem'd affected alſo with the Palſey) the breſt was not able to be dilated for drawing the Breath deep enough, wherefore, being always out of Breath, he labour'd under continual affects of thoſe Parts, and an Agitation of the whole *Thorax*. In this ſtate departing from *Bathe*, he is commanded by his Phyſician to abſtain for a whole Month from any Remedies taken from *Pharmacy*: which when he had religiouſly obſerved, through hope as it were of a Reſurrection, that time being paſt, all deliberation was now late concerning the uſe of Medicines: for beſides the Paralytick and withered Members, his Belly ſwelled, his Reſpiration was yet more difficult and letted, that the diſeaſed was ſcarce able to draw his Breath: his Pulſe being very weak, with frequent Swoonings, and Faintings hapning upon any Motion of his Body: ſo that hereby ſcarce any place at all being left for *Cathartick*s, he muſt inſiſt only on *Cardiack* and *Paralytick Remedies*: notwithſtanding the uſe of which, the diſeaſed within ſix weeks labouring under a very great dyſpnæa for many hours, at length dyed: the immediate cauſe of whoſe deceaſe I conceive to be *Polypous Concretions* of Blood in the Heart, for in regard the Motion of the *Præcordia* was greatly letted for a long time, nothing ſeems more probable than that thoſe kinds of carneous lumps as it were, were concreted within the Ventricles of the Heart.

For illuſtrating a little farther the Theories of the Palſey, and alſo of the Lethargy and Carus, I ſhall here give you another Example, with Anatomical Obſervations, which hapned whilſt the precedent things were printing.

A child, little more than three years of Age, of a moist Brain, as it appear'd by sore Inflammations of his Eyes, and watery pushes of his Face (to which he had been sometimes obnoxious) at the beginning of *Autumn* being ill, with a slow Fever and a dejected Appetite, became very drowsie and sleepy, so that he slept almost continually day and night; but being awak'd, he knew the standers by, and answer'd aptly enough to things ask'd: meet Remedies, *viz. Clysters, Vesicatories, Cathartick*s, also *Juleps, Spirit of Harts-horn, Powders*, with many other things usual in this case, being forthwith, and carefully given him, did so much good, that within six or seven dayes the diseased being free from his Feaver, waking sufficiently, and desiring Food, seem'd to recover, and scarce to have any more need of Phyfical help., But in a short while after (I know not on what occasion) undergoing a relaps, and being drowsie again, he was presently affected with a great Stupefaction, so that being with difficulty to be awak'd, he scarce knew any thing, or did any thing with Knowledge; the next day after, being utterly stupid, tho being pinch'd hard, he would open his Eyes, and roul them this way, and that, he saw nothing: and within a day or two a Palsey of the whole right side followed: The former Remedies repeated to him, and likewise *Sneezers, Apophlegmatisms, drawing of Blood, Cataplasms* to be applyed to the Feet, and *Epispastick*s to the whole Head shaved, with other Medicines and wayes of Administrations prescribed in order, did nothing; but the diseased, after he had lain so for three or four dayes insensible, the Pulse and Respiration at length failing, he dyed.

The Scull being opened, the foremost Region of the Brain, almost as far as the Insertion of the fourth *Sinus*, was swollen, being covered with a limpid Water shining through the *Membranes*, which upon the dissection of the *Meninges* presently flowed forth; Moreover, at that place the portions of the Brain cut off by piece-meal appear'd too moist, and almost without red or bloody specks; but in the hindmost part of the Brain the Vessels were red with Blood, and the cortical Substance appeared more low and firm without a Tumour, or being floated with Water: from these things (as we have concluded before) it will manifestly appear that the Cause of the *Lethargy* depends on a watery glut of filth in the outward part of the Brain.

The Brain being cut off piece-meal, and a hole being made into the foremost cavity, strouting with a lympha, the limped water sprung forth as tho it had been pent up in too narrow a space before: whose mighty store had filled all the Ventricles to the top, and (as it seem'd) by compressing the *Thalami Optici* had caused the blindness, and by entring or compressing one *Corpus Striatum*, or its Pores, had brought the Palsey.

The *Plexus Choroeides* appear'd as parboyled, somewhat white, and almost without Blood, its probable that all the *Lympha*, or the greatest part of it, wherewith the Ventricles of the Brain were floated,

distilled

distilled from those Vessels; tho in this case if (as some think) the watery *latex* sinking lower from the *cortex* of the Brain, at length having wholly pass'd the Brain, could fall into those Sinus's, a reason may not uneasily be thence taken wherefore the Lethargy seeming first to be cured, by and by being more violent, return'd again, with a *Blindness* and *Palsey* joyn'd with it, to wit, as at first the store of soporiferous matter fell from the Cortex of the Brain into its cavity, the animal Function grew a little clear; but afterward, when a new matter sprung in the Cortex of the Brain, and this falling into the Sinus's, was gathered together to a fulness, thereupon a Relapse of the former Disease happened with the addition of a blindness and Palsey.

Now tho the Dropsy of the inner part of the Brain, or an inundation of its Ventricles, by compressing the *corpora striata* or *thalami optici* causes a Palsey, or blindness, or by twitching the Origines of the Nerves, Convulsive affects; yet it most evidently appear'd by a late observation, that the Lethargy does not arise from such a Cause, but only from the outward part of the Brain being floated or compress'd.

A certain Gentleman, long sickly, after that he had been troubled almost for five Months with a Colick, or rather with a most violent scorbutick and running Gout, (in which not only the Viscera and Fibers were affected with great Gripes, but likewise the Membranes, and all the Muscles of the whole Body almost with continual Tortures) and at length suffer'd in his Members sometimes horrible Convulsions, sometimes Apoplectick Invasions as it were, or an offuscation of the Sight, at last his Strength being spent, and the Stores of his Spirits wholly exhausted, he dyed. For seven dayes before his decease (excepting only the last save one) being more lively as to his Sense and Understanding, he lay almost continually awake: a little before this long waking, upon a Vesicatory's being applyed to his Neck, a vast quantity of water flowed to it; and thence-forward flowed forth daily, even to his death, that I may hence suspect he continued thus without sleep, by reason of the watery humour withdrawn from the Brain in too great a plenty.

The *Head* of the defunct being *open'd*, the inward Cavities of the Brain, or all its Ventricles appear'd fill'd to the top, and strouting as it were with a limpid water, nay about the top of the *Spine* the *Funis medullaris* it self seem'd to be surrounded with, and immerg'd as it were in Waters there heapt together. Without doubt for this reason such violent pains and cramps infested him in his Loyns and Members, and in the whole Habit of the Body; and by reason of the deluge in the Ventricles, he became obnoxious to frequent offuseations of the Sight, and resolutions of the Limbs: nevertheless there was no Lethargy here, tho the long watching was caus'd by reason of the waters deriv'd in too great a plenty by the Vesicatories from the circumference of the

Brain. This Perſon had alſo gotten a Dropſie in his Breaſt, by reaſon of the Lungs being much vitiated: the Liver being of a vaſt bigneſs, appear'd every where with white ſpots, and almoſt without blood; ſo that the depravations of the blood and nervous juyce ought to be aſcrib'd in ſome ſort to theſe faults of the *Viſcera*.

CHAP. IX.

Inſtructions and Preſcripts for the cure of the Delirium and Phrenſy.

So far of *Cephalick Diſeaſes*, by which the Animal Functions by themſelves, and as they are *Corporeal*, are wont to be letted or perverted, without reſpect to the *rational Soul*; in ſome of them, *viz.* in the *Vertigo* and *Palſey*, the Underſtanding for the moſt part continues clear and lively: and in the reſt, as an Eye plac'd in an obſcure place, it beholds either no Species at all, or a few only ſet before it with a groſs appearance, but is not eaſily carried into a great *Errour*, or a *Fury*: which kind of Symptoms are generally cauſed by other affects of the Brain, and of the Spirits reſiding in it, of which we ſhall now treat, for if at any time the *Imagination* be ſo troubled, or perverted, that it either conceives amiſs, or ill compounds, or divides the Species and Notions preſented by the Senſe or Memory: thereupon preſently the Underſtanding deſcryes, or frames only deform Conceptions and Thoughts, diſtracted from each other, and greatly confus'd, which are repreſented to it by the Brain ill affected, as erroneous appearances by a variegated, and diſtorted Glaſs: there being many ways with which the Imagination, and conſequently the Mind and Will, and other Powers of the ſuperiour Soul are wont to be perverted or deprav'd, they all are denoted by the common word *Deſipientia*. Now this *Affect* is diſtinguiſh'd into a *ſhort one*, which is called a *Delirium*, and a *long* or continual *one*, which is either joyn'd with a *Fever* and is called a *Frenſy*, or happens without a Fever, and to it either a *Rage*, or *Sadneſs*, or *Stupidity is joyned*; and therefore it is divided into a *Mania*, *Melancholy*, and *Fatuity*. We ſhall ſpeak of each of theſe in order, and at preſent of the *Delirium* and *Frenſy*.

Tho the *Delirium* be not a Diſeaſe by it ſelf, but is only a *Symptom*, proceeding from other affects: yet becauſe in the cure of theſe on which it happens, it is uſual to obviate it for the moſt part with appropriate Remedies; Therefore it ſeems to concern us to inquire ſomewhat ſtrictly into its *Nature* and *Cauſes*. That word taken properly is the ſame

same as *Dementia*, and denotes such an annoyance of the animal Function, as arising in the *fits of Fevers*, *Drunkenness*, and sometimes in the *Passions* called *Hysterical*, induces men to think, speak, or do absurd things, (*viz.* some of these or all of them together) for a short time.

A *Delirium* is raised in as much as the Animal Spirits either being too much irritated, or put in Confusion, are carried hither and thither within the globous frame of the Brain (where the Fansie and Memory have their Seats) in a disorderly and tumultuous manner, for so whilst the various species of the Imagination and Memory being rais'd together, are confounded with each other, only absur'd and incongruous Phantasms are presented to the Rational Soul, and therefore the Acts of the Understanding and Will are wrought only irregularly. By reason of the Animal Spirits being irregularly mov'd within the Meditullium of the Brain, or the *Corpus Callosum*, incongruous conceptions and confused thoughts are presented to the Rational Soul, it hapning in like manner, as when the Species of visible things are brought to the common Sense after a long turning round of the Body, whence all things seem to run round, sometimes to be raised on high, sometimes to be depress'd low; so that nothing is seen fix'd and setd'd in its due site and position. In a Brain rightly disposed, the motion of the Animal Spirits is perform'd in certain numbers and measures, as it were in a Dance; while certain Spirits are moved in these tracts, others lye still in those, afterward these maintain those with a supply in motion, and the several Acts of each Faculty become as so many distinct undulations of Waters in a River, but in a *Delirium* all the Spirits skip about together, and meeting each other in a tumultuous manner, or taking several ways, dance about like People distracted: Moreover, even as these being struck with such a Rage within the frame of the Brain, raise manifold and very troubled thoughts: so while they are carried beyond the confines of it into the Nervous Origine, they produce an Idle talking, absur'd Gestures of the Body and Members, and often Convulsive motions, yet since such a wild motion of the Spirits (otherwise than in the *Frensy* or *Mania*) soon ceases, and after that that tumult is over, no deviating tracts are made in the Brain, the *Delirium* soon passes off, and the affected in a little time come to themselves again, no foot-steps of the distraction remaining.

If it be ask'd, whence this short Fury is given the Spirits residing in the Brain, that shaking off the Reins of the Mind, they are so all in confusion in their Oeconomy; we say, that they enter upon this disorder for a double reason, *viz.* this Rage is either immediately communicated to them from the Blood irrigating the compages of the Brain; or certain animal Spirits residing in some outward part within the *Genus Nervosum*, first begin a certain disorderly Motion; and afterward the same disorder being communicated to the Brain by the Ner-

vous Ductus's, and affecting in like manner the Spirits there residing, causes the *Delirium*. There are various kinds and causes of both these, wherefore we shall here briefly touch the cheif; and first, it shall be shewn how and on what occasions the Blood, either swelling with too great an effervescency, or being full of a venemous matter, becomes the Parent of the *Delirium*: in as much as it insinuates into the Pores and Passages of the Brain, either exorbitant and masterless Particles, or such as are malignant, and subverting the animal œconomy,

1. As to the former, in the Fits of intermittent *Fevers*, and the height of such as are continual: the Blood being troubled with an immoderate burning, sometimes raises a *Delirium* by the meer *Impetus* of its Ebullition; viz. in as much as being very turgid, while it passes the small Branches of the Arteries spread all over the outward circumference of the Brain, it greatly puffs them up, and stretches them: and therefore compressing the substance of the Brain, it drives the Spirits several wayes, and forces them into very confused crowds as it were. Moreover, from the Blood's growing thus turpid through a frothy Rarefaction, *Effluvia* of heat, and Heterogeneous Particles with them entring the Pores and Passages of the Brain, exagitate the Spirits, and carry them violently hither and thither in a tumultuous manner.

2. For a like reason in a manner to this, *Drunkenness* causes a deep Sleep or a *Delirium*: *viz.* In as much as the mass of Blood insinuates into the Pores and Passages of the Brain, the spirituous Particles of the Wine, which causes it to boyl, and by which the Spirits residing in them, are either overwhelmed, or put into disorderly or confused Motions.

3. Nor does the Blood only ministring febrile and turgid, or *vinous* and masterless Particles, but sometimes such as are *malign* and *venemous* as it were, cause a *Delirium* with or without a Fever. As to the former, in the *Plague*, *small-Pox*, *malignant Fevers*, (tho the heat be moderate) the malignant matter conveyed to the Head produces abrupt, incoherent, and at length distracted Notions, in as much as it dissipates the stores of the Spirits, rather than by driving them into a tumult.

4. For a like reason to this some Poysons, and venemous things inwardly taken, and (as some say) outwardly applyed, soon bring a *Delirium*: this is vulgarly said of *Solanum furiosum*, *Mandrake*, and certain other Plants: the thing is most notorious concerning the Roots of the *wild Parsnip*. An intimate Friend of mine, and a Man worthy of credit, and also very learned, told me once, that he went into the House of a certain Gentleman, where the Lady, her Daughters, and all the maid Servants (one only excepted) being all delirous at the same time, ran about the House leaping and talking incongruous and absurd things; he thinking them plainly distracted, was given to understand by the Maid, who was well in her Wits, that all this hapned from eating Parsnip Roots, which she alone had not touched; and the

event

event also confirmed it; for after, being tired, they had slept, all of them awak'd sober.

5. But moreover, we observe that a *Delirium* is sometimes raised by a scarcity of the animal Spirits, and their great dissipation; for when their Orders are broken and discomposed, they minister confused and incongruous Notions, as well as when tumultuarily hudled together. Hence we observe, that some have grown delirous after great *Hemorrhagies*, or long *Watchings*, and a long *Fasting*: for this Reason many dying Persons speak light-headed and incongruously.

There remains the other kind of *Delirium*, in which the Blood being without fault, the animal Spirits residing somewhere in the *Genus Nervosum*, first begin to fall in disorder, and afterward the same affect creeping to the Brain by the *Ductus's* of the Nerves, moves the Spirits residing in its *Meditullium* to a *Delirium*: this is obvious in the Passions called *Hysterical*, to wit, that after a rising of the Belly, and an Oppression of the Heart, at length sometimes a privation of Sense, sometimes a talking idly, with a Weeping and a Laughter ensues. In like manner, I have observed in a violent *Colick*, that sometimes extream Tortures about the *Viscera* or Loins have presently past into a *Delirium*, then a little after this ceasing, that the Tortures returned. I knew a Girl, who after taking an *Emetick Medicine* was wont constantly to be delirous till it wrought: for this also makes what I often observe, that a *Delirium* is raised by a *Gangreen*, beginning in some outward Member: and this is generally accounted for a mortal sign in a *Wound*, or *Ulcer*; because it denotes the animal Spirits to be generally a killing in the part affected.

Nor does that Symptom afford a better Prognostick to such as have been long valetudinary, and are almost worn away: in the Fits of intermittent Fevers, its in a manner alwayes safe, but in continual Fevers it's of a doubtful and somewhat a suspected event; in malignant Fevers it commonly threatens ill: in Convulsive Diseases, the first invasions of a *Delirium* for the most part are without danger, but a frequent access of it often begets a disposition to a *Carus*, *Apoplexy*, or *Palsey*.

This affect, as often as it seems safe, does not require a *Cure*, for the Fit soon and easily passes off: but because some, whose Brain is weak and lax, and whose animal Spirits, being too dissipable, are apt to a slight and confusion being troubled on any light occasion, are wont presently to act or speak delirously; therefore there is need of Physick for these, tho not of Hellebore, but of Cephalick Remedies for corroborating the Brain, and fortifying it against the incursions of the morbifick Matter; also for strengthning the animal Spirits, and rendring them more fixt and stronger to resist. We have given the Forms and wayes of Administration of these Medicines before, they being profitable for removing the *Procatarxis* of any other Cephalick Disease.

A *Delirium* happning upon *continual and malignant Fevers*, requires a peculiar way of Cure, for it particularly indicates that the morbifick matter, dangerouſly convey'd toward the Head, ought to be revuls'd thence ſome way or other; for which end, let *Veſicatories* be applied to the Neck, *Plaiſters* or *Cataplaſms*, or the *Fleſh* or *warm Viſcera of Animals* to the Feet: Inwardly, let *Temperate Cephalicks* be given, as *Powders of Coral* and *Pearl*, the *Waters of Black Cherries*, *of the flowers of Cowſlips* and *Poppies*, and other things refreſhing and ſoothing the Spirits.

Theſe things being thus premitted concerning the firſt and lighteſt manner of Raving, let us aſcend to a higher degree of it, viz. the *Frenzy*, which is far greater, and more durable than the former affect. In a *Delirium* the perturbation rais'd in the Spirits, reſiding in the Brain, ſeems like an undulation of Waters in a River, upon throwing in a ſtone; but in a *Phrenſy* their commotion ſeems as the troublous motion of the Sea-waves raging upon a tempeſt.

The *Phrenſy* is defin'd, That it is a *continual raving*, or a *depravation of the chief faculties of the Brain, ariſing from an inflammation of the Meninges with a continual Fever*. With this Diſeaſe another allied to it is rank'd, viz. the *Paraphreneſis*; and its cauſe is ſaid to be not the Inflammation of the Membranes that cover the Brain, but of the Diaphragm; moreover, in both affects the Fever, as tho it were only ſymptomatical, is ſaid (as alſo in the Pleuriſie tho falſely) to ariſe from the ſame Conjunct Cauſe, viz. a *Phlegmon* of ſome Part: but that the Phrenſy rather ſucceeds the Fever, both *Hippocrates* heretofore, and now every Vulgar Perſon obſerves, and that it is produc'd becauſe the boyling Blood conveys its aduſt recrements to the Head; *viz.* foraſmuch as the Urine of a Feveriſh Perſon being changed from being troubled and thick, to be thin and watery, indicates an imminent Phrenſy: of which affect therefore the cauſe is gathered to be the removal of the febrile matter into the Brain.

But as to the Conjunct Cauſes of the *Phrenſy* and *Paraphrenitis*, it will be eaſie to ſhew, that the former does not alwayes proceed from the inflammation of the Meninges, and the latter never from that of the *Septum*: in Anatomical Diſſections I have commonly ſeen the Meninges, nay ſometimes alſo the outward circumference of the Brain beſet with a Phlegmonous tumour; but the diſeas'd being not affected with a Phrenſy, but on the contrary with a drowſineſs, dyed of a *Carus* or other ſleepy diſeaſes. And indeed Reaſon plainly dictates the thing to be thus, for inflam'd Meninges, and much more ſwollen, greatly compreſs the Brain, and ſtop the paſſages of the Spirits, which cauſes a Lethargy; whereas in a Phrenſy the Spirits are dilated above meaſure, the Pores of the Brain being all open'd: tho it may happen by a long continuance of that Diſeaſe, that the Blood being heaped together too much within the Veſſels of the Meninges, and there ſtagnating,

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at length begets a *Phlegmon* in them; but then we ſuſpect for that cauſe (by reaſon it frequently falls out ſo) that the Phrenſy paſſes into a *Carus* or *Lethargy*, of which ſuch as have the Phrenſy often dye.

Nor do we leſs reject the inflammation of the Diaphragm, which *Galen* with others have aſſign'd for the cauſe of the *Paraphrenitis*: Anatomical obſervations plainly make out the contrary: ſome time ſince, opening the Body of a Girl dying of a ſudden *Leipothymia*, we found in the fleſhy part of the Diaphragm, a great Abſceſs with a bagg, full of a gore and little bladders of Water, yet ſhe was never wont to be troubled with a *delirium* or *phrenſy*. And heretofore, when we diſſected the Body of a Renowned Perſon of the Univerſity, who dyed of a baſtard and long continued Pleuriſie, it manifeſtly appear'd that a great Abſceſs in the *Pleura* and *intercoſtal Muſcles*, being ſuppurated and broken inwardly, had pour'd a mighty quantity of *Pus* into the cavity of the *Thorax*, which corroding the ſubjacent Diaphragm, had made a mighty hole in it; and yet this Perſon in all his ſickneſs had neither the Phrenſy, nor was delirous; wherefore I judge that this affect is ſcarce ever produced by ſuch a Cauſe: but that opinion ſeems to have riſen thence, that oftentimes in a true Phrenſy, together with a continual Raving, the motion of the Diaphragm is wont to be hindred or perverted: as may be gathered from the uneven and difficult Reſpiration, *viz.* ſometimes being painful and ſuſpended, as it were, ſometimes thick and ſwiftly repeated with an Inſpiration, ſometimes doubled, which kind of ſymptoms, and withall the alienation of the mind are ſaid to proceed from the *Septum* being inflamed, and therefore convuls'd: wherefore the Ancients called the Diaphragm *Phrenas*: tho they need not have done it, if they had conſidered that all the action of the Diaphragm depends on the efflux of the animal Spirits from the *Cerebellum*, and therefore, if when the Phrenetick matter invades the Brain, ſome part of it withall ruſhes into the *Cerebellum*, beſides the raving, the motion alſo of the *Septum*, tho in it ſelf being without fault, will be altered.

Therefore the formal nature of the *Phrenſy* ſeems to conſiſt in this, that the animal Spirits being very much irritated, chiefly in the whole brain, are driven into diſorderly, very confuſed, and withall impetuous Motions; ſo that the acts of every animal Function are depraved, and variouſly perverted: the Ideas of things are confounded, *&c.* Moreover the Spirits, not only in the Brain, but likewiſe in the *Cerebellum*, and every where in the *Genus Nervoſum*, being ſtruck as it were with a rage, fall in a tumult; wherefore ſuch as have the *Phrenſy* do not only ſpeak ravingly, but breath unevenly, cry out, beat their Fiſts, throw their Hands and Feet, and exert all their Members with a mighty ſtrength and force: that really the whole Soul ſeems furiouſly to fret and rage in the whole Body, or rather being ſet on fire as it were,

were, to be all in a flame: and indeed the Phrenſy cannot be more aptly defin'd, than that *it is a Phlogoſis or inflammation of the whole ſenſitive Soul, or of the animal Spirits in their whole Hypoſtaſis*; This burning flame always beginning from the Spirits reſiding in the Brain, and thence paſſing into the other parts of the ſenſitive Soul, ſeems to receive both the matter which firſt kindles it, and the conſtant ſupply of Fuel for it from the Blood, firſt burning with a feveriſh blaſt; for its probable that the Blood, feveriſhly burning, brings into the Brain ſometimes ſulphurous Particles together with the ſpirituous; which being half kindled, and in a manner on light fire, if they have penetrated together with the others, thence preſently entring all the medullary and nervous Ductus's, every where cleaved to the Spirits, and render them, being ſo inflamed, mightily exorbitant and implacable. Certainly it is more likely that the Phrenſy is cauſed after this manner by the inflammation of the Spirits, than by that of the *Meninges* of the Brain, which (as I have found by frequent diſſections) will more certainly bring the Head-ach or Lethargy, than a Fury.

As to the Procatarctick Cauſes of the Phrenſy, we ſhall find them partly in the Blood, and partly in the Brain, and in what reſides in it.

The previous diſpoſition of the Blood diſpoſing to a Frenſy, ſometimes is ſimple, and ſometimes two-fold: the former is its hot and ſharp or bilous conſtitution, to wit, that it contains a great many ſulphureous particles in it ſelf, which being kindled more than they ought in a Fever, are apt to inflame the Blood more, and to inſinuate ills burning flame into the Brain: this diſpoſition, when it is powerful and mightily actuated, often produces that Diſeaſe by it ſelf; but for the moſt part there is another diſpoſition of the Blood, which aids the former, and renders it more efficacious, to wit, that beſides ſulphureous and inflamable particles, there are others ſharp and penetrative, which enter the Pores and open them, and ſo more readily introduce the others: Saline Corpuſcles joyned with ſulphureous in ſome ſort effect this; hence Cholerick and melancholy Perſons that are in a Fever, are more inclin'd to Phrenſies: but much rather heterogeneous Particles, when they are in the Blood, being ſtirr'd by a Fever, open the entries of the Brain, and let in all ſuch Particles as are inflamable: wherefore the Phrenſy frequently happens upon the ſmall Pox, and malignant and peſtilential Fevers.

The other Preparation for a Frenſy, belonging to the Brain, conſiſts partly in the temper and conformation of it, and partly in the diſpoſition of the Spirits reſiding in it: as to the former, thoſe that have a hot and dry Brain are found more prone to a Frenſy; not that that Conſtitution is more obnoxious to an inflammation, or *Phlegmon*, (for it is leſs apt to this) but becauſe in ſuch a Brain, otherwiſe than in a hot and moiſt, or a cold and dry, the pores and paſſages

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are more open, and gaping too much, afford a paſſage to the incentive matter miniſtred by the Feaver: Which likewiſe will much more eaſily be admitted, if the Spirits being very apt to be put to flight, and pathetick, on any light occaſion are prone to the paſſions of ſadneſs, fear, anger, or hatred; ſo that they leſs withſtand the incurſions of the extraneous matter, and more readily take fire themſelves.

The *evident cauſes* of the Frenſy are either remote, *viz.* whatſoever things are wont to raiſe the febrile diſtemper; as Surfeiting, Drunkenneſs, a violent perturbation of the body or mind, ſolemn evacuations ſuppreſt, with many others; or immediate, as a Fever, and its little appendixes and adjuncts; *viz.* if it be peſtilent, malignant, or ill diſpoſed; if it ariſes by ſurfeiting with meats or drinks which are very diſagreeing; or if it follows upon violent paſſions of love, hatred, envy, indignation, or ſadneſs, or immoderate ſtudies: for theſe kinds of occaſions render the Blood and Spirits feveriſhly boyling, very much inclined to the affect of the Frenſy.

This Diſeaſe, according to the temperament of the Diſeaſed, is ſaid to be ſanguine, bilous, phlegmatick, or melancholly; and this not improperly, for the Animal Spirits, according to their various diſpoſitions, are wont to rage after a different manner in this Diſeaſe.

The *Prognoſtick* in this diſtemper is always dubious, and to be made with the ſuſpicion of an ill event: For the Frenſy is a moſt acute and dangerous Diſeaſe of it ſelf; moreover, if it happens upon a peſtilent, malignant, or ill diſpoſed Fever, we may expect none but a fatal event.

If a Frenſy happens to a ſound Body, well in fleſh, a ſanguine temperament, and in youth, there is a greater hope of doing well, than if the Diſeaſed be elderly, lean, bilous, and ſubject to violent paſſions.

If a Frenſy frequently remitting, has lucid intervals, it is better than if the fury be without diſcontinuation: but if the Diſeaſed ſeeming ſometimes to be better, after moderate ſleep always awake frantick, it is a ſign that the Diſeaſe will be obſtinate, and conſequently dangerous; *viz.* inaſmuch as a new ſtore of incentive matter is often miniſtred to the Brain, which we have ſhewn elſewhere to be done much more plentifully during ſleep, than whilſt waking.

The Frenſy is either terminated in a ſhort time with a Fever, by a Recovery, or Death; or being long protracted, and remaining after the Fever, it is either cur'd at long run, or paſſes into other Diſeaſes, *viz.* a *Lethargy*, or *Mania*, or *Melancholy*.

If a Fever having a laudable *criſis*, by a plentiful ſweating or making water be throughly ſolv'd, the Frenſy alſo for the moſt part will wholly ceaſe; but if the Fever being not determined, ſtill ſends the

morbifick matter into the Brain; ſo that beſides the animal functions being deprav'd, the vital begin to fail (which will plainly appear from the Pulſe and reſpiration altered for the worſe) if the Urine be pale, if frequent droppings of Blood from the Noſe, if Vomitings, and Convulſions happen, the Phyſician may conclude that Death is at hand.

Sometimes a Fever, tho it be not determined at once and perfectly, yet afterward paſſing off by degrees and leiſurely, leaves the Frenſy or raving behind; which if by its long ſtay it has not defac'd the former tracts of the Spirits in the Brain, afterward it either ceaſes by degrees of its own accord, or is cur'd by the help of Medicines.

But if by reaſon of the Frenſy being long protracted, the *Meninges*, or *Cortex* of the Brain are at length poſſeſt with a phlegmonous tumour, or a ſerous glut of filth hapning from the Blood or *Serum* there heaped together and ſtagnating, the Lethargy, or the ſleepy affects enſue; whoſe Cure is often difficult, or none at all: But if after a long Frenſy, either the Animal Spirits (tho their burning ceaſes) contract a vicious diſpoſition, or if the Pores and paſſages of the Brain are perverted, often a perpetual raving (the former Diſeaſe paſſing into a *Mania*, or *Melancholy*, or *Fatuity*) enſues: Wherefore it is vulgarly ſaid of Franticks, not ſoon cured, that *the Brain is cracked*; ſo that afterward they always are mad, or become delirous.

In the Cure of the Frenſy, we muſt have regard both to the Fever and to the fury: The feveriſh burning, or immoderate effervescence of the Blood, which for the moſt part is the antecedent cauſe of the other affect, ought in the firſt place to be reſtrained and appeaſed, and withall the Animal Spirits ought to be pacified and freed from any violent excandeſcence. If a Frenſy happens about the beginning or middle of a Fever, in a manner the ſame remedies and method of Curing conduce for both ends: But if that affect happens upon this whilſt it is in its greateſt force or height, the ways of curing often are contrary to each other; and there is need of great caution, leſt while we give help to one diſeaſe, we increaſe the other; in this caſe the vital indication concerning the preſervation of the ſtrength has the firſt place, and let not Blooding or Purging be uſed raſhly, and in a large meaſure.

In the former caſe, when the Fever and Frenſy are almoſt of the ſame ſtanding, let *Phlebotomy*, which is ſeldom or never to be omitted, preſently be uſed; and if the ſtrength bears it, let it be ſometimes repeated for nothing depreſſes and diminiſhes the immoderate flame of the Blood as much as this Remedy, and nothing more removes or withdraws its burning flame from the Animal œconomy: Wherefore, if the caſe requires it, let a Vein be opened ſometimes in the Arm

Arm or Hand, ſometimes in the Leg or Foot, ſometimes in the Neck or Forehead; ſometimes haply it may be expedient to open the Artery of the Temples; and ſometimes alſo to draw Blood from other places by *Leeches* or *Cupping-glaſſes*, for this is the chiefeſt relief: And according to *Galen*, this being the firſt and greateſt of all Remedies, is wont to ſatisfie a great many indications in the Frenſy.

Moreover, to prevent the violent recourſe of the febrile matter from the *Viſcera* to the Head, *Clyſters* will be of chief uſe; with which, if need be, let the Belly always be kept ſoluble: *Vomits* and *Purges*, unleſs only ſuch as are lenitive, have ſeldome place here: Let *Cataplaſms* of *Rue*, *Cammomil*, *Vervain*, *Briony Roots*, *Red* Poppy-*flowers*, with *Soap* be applied all over the Feet: or in their place let *Pidgeons* ſlit in two be applied whilſt they are warm. Mean while *Juleps*, *Apozemes*, *Powders*, *Confections*; by which both the boylings of the Blood, and the excandeſcence of the Spirits are appeaſed, ought to be preſcribed according to occaſion.

Take the waters of Apples, Black Cherries, Cowſlips, of each four ounces; of whole Citrons two ounces, Pearl powdred a dram, Syrup of the juice of Citrons an ounce, mix them, make a Julep, let three ounces be taken three or four times a day.

Take Roots of Graſs, Leaves of Wood-Sorrel, Burnet, *of each a handful, Barley half an ounce; Apples ſlic'd, Corinths, or Strawberries, or Rasberries, a handful; let them boyl in four pounds of Fountain-water to the conſumption of a third part, to the clear ſtraining add Syrup of Violets an ounce, Sal Prunella a dram and a half.*

Take freſh and tender leaves of Borage four handfuls, Wood-Sorrel two handfuls, two Apples pounded to a maſh, Sal Prunella two drams, the pulp of one Orange, double refin'd Sugar an ounce, being bruis'd together pour to them of Fountain-water two or three pounds, make a ſtrong expreſſion, keep it in a glaſs to be clarified by ſetling: Let ſix or ſeven ounces be taken at pleaſure often in a day. For quenching thirſt, drink at pleaſure the divine drink of Palmarius, viz. Fountain Water with Sugar, and the Juice of a Limon, or Water, or Whey with the leaves of Meadow-ſweet, or Burnet infus'd, or boyl'd in them; emulſions of a decoction of the roots and flowers of Nymphæa, with the ſeeds of Melons, or fountain, or diſtill'd Water, with the pulp of boyled Apples diſſolved in them.

Hypnoticks are often neceſſary in this Diſeaſe, but ſuch as are ſtrong are not proper preſently at the beginning, nor may they be frequently uſed, becauſe ſleep cauſed by opiats brings the matter more to the Brain, and fixes it there more deeply.

Take Water of Cowſlip flowers four ounces, Syrup of Meconium half an ounce, Pearl a ſcruple, make a draught to be taken late at night.

℞ *Take white Poppy-ſeeds two drams, Sugar-candy a dram and a half,*

being bruis'd together, pour to them of white Poppy-water six ounces, wring it forth, and take it after the same manner.

Let Narcoticks, consisting of meer *cold things*, be given with caution; because they do not agree with some, whose Stomachs have their fibres very tender and sensible. I have often observ'd that these kinds of Hypnoticks have caus'd a great oppression in the Ventricle, and that then presently its inflation, and a little afterward distractions and disorderings of the Spirits in the Brain, nay, in the whole Body followed: So that not only a frustration of sleep, but a mighty restlesness was caus'd.

Let a dose of liquid Laudanum, prepared with Salt of Tartar, or the Juice of Quinces, be given in a convenient liquor.

Epithemes also, which provoke *Sleep*, are often applied to the *Temples*, *Forehead*, and *Sinciput*, with success: of which kind are *Oxyrrhodinum*, an *Embrocation of Water or Milk, liniments of the Oyl of Nutmegs by expression, and unguentum populneum; to which sometimes let five or six grains of Opium be added; or a cake of Roses, or of Poppy-flowers, with Vinegar and Nutmeg*, &c.

Again, on this account, rather than for removing the inflammation of the *meninx*, *the warm lungs of a Lamb or Weather*, also *Pidgeons or Chickens cut in two*, often give an excellent relief. For this use the *great Burr-dock bruised and mixt with Womans Milk, and applied to the Sinciput shaved is greatly commended.* Also *Penotus's Epitheme of twelve grains of Musk, half a scruple of Camphire, and twenty ounces of Rose-water, impregnated with the Tincture of Red Saunders, is commended by some.*

Moreover, not only to the *Head*, but likewise to the *Heart*, *Liver*, and other parts, *Epithemes* are wont to be applied: *Let a Sacculus of fine Linnen, with lays of cordial Species and Cotton stuck in it, and irrigated with the distilled Water or Vinegar of Roses be applied to the Præcordia; also let Linnen Cloaths dipt in Vinegar of Roses be laid on the Testes: Let the Feet be bathed with a decoction of the leaves of Willow, Lettice, and the heads of the white Poppy:* But let these kinds of cooling and mitigating topicks be us'd only about the *beginning of the Disease*; in its greatest height let *Resolvents*, and *Emollients*, as *the flowers of Camomil, Melilot, Elder, &c. also the leaves of Mallows, Arach, Marjoram, Hyssop*, and the like be added: In the *declination of the Disease* let *Resolvents* only, and those sparingly be used.

In the mean while a very great regard ought to be had of the *Strength*, for this being too much broken, all hope of Cure is lost: Now the strength is wont to be soon consumed by reason of great watchings, perpetual agitations of the body and mind, a thin dyet, and Blooding sometimes, it being often needful. Wherefore we must take a great care, lest whilst we go about to eradicate the Disease by *Purging*, and frequent *Bleeding*, we on a sudden weaken the

Vital

Vital function; if this begins to waver, neglecting the Frenſy, and allowing a more nouriſhable Food, we muſt cheifly uſe *Cardiacks*.

Take Tincture of Coral half an ounce, let twenty grains be taken twice or thrice a day, with a doſe of a Cephalick or cordial Julep, or let the milky ſolution of Coral, made with the Juice of Oranges be given to a ſpoonful often in a day.

Take Rob, or Conſerve of Rasberryes, and Barberryes an ounce, Pearl prepared, Magiſtery of Coral, of each a dram, Confection of Hyacinth two drams, Syrup of the Juice of Kermes what ſuffiſes, make a Confection: let the quantity of a Nutmeg be taken three or four times a day, drinking after of the following Julep three ounces.

Take Waters of the Flowers of Nymphæa, red Roſes, and of the Leaves of Medow-ſweet, of each three ounces, Syrup of Coral two ounces, Aqua Cordialis Saxoniæ a dram, mix them.

Take Conſerve of the Flowers of Nymphæa, of Violets of each an ounce, Lettice Stems condited half an ounce, Powder of red Coral ground on a Marble with the Juice of Oranges, and dryed, two drams, Species Diamargariti frigidi a dram, white Poppey Seeds a dram and a half, with a ſufficient quantity of Syrup of the Juice of Wood-ſorrel, make an Electuary, let the quantity of a Nutmeg be taken often in a day.

In the Phrenſy not only the Belly, but likewiſe the Bladder, when unmindful of its Office, ought frequently to be moved or irritated to it. Wherefore the diſeaſed are to be admoniſht, and a Chamber-pot being preſented, to be entreated to make water; which if they do not obey, *Let the Region of the Share be fomented with a Decoction of Pellitory of the Wall, Elder Flowers, the Seeds of Parſly and wild Carrots with a Spunge, and after the Fomentation let it be anointed with Oyle of Scorpions and Unguentum Dialthæa: in a long Suppreſſion of Urine you muſt put a wax Candle into the Urethra.*

So many and ſo various Caſes and Stories of Perſons troubled with the Frenſy are written by *Hippocrates* in *lib. Epidem*: that it may ſeem to little purpoſe to add others here: eſpecially becauſe it would be a thing of an immenſe Labour and Tediouſneſs to relate the various Conditions, and Geſtures of Franticks: mean while, as to the event of the Diſeaſe no great diverſity occurs. For, for the moſt part either, the Fever being determined, the Frenſy ceaſes by degrees, or that having no Criſis or an ill one, either death or a long raving enſues: Nevertheleſs for the Illuſtration of our *Hypotheſis* concerning the Inflammation of the Spirits, I ſhall here ſet before you one rare inſtance.

Some time ſince I was called to cure a robuſt Maid ſervant, who being in a Fever, and very much diſtracted, was continually kept bound in her Bed: to this Perſon I ordered Blood to be drawn in a plentiful manner, and afterward the blooding to be repeated, the Belly to be frequently looſned by a Clyſter, and all other Adminiſtrations uſual in this caſe to be performed in order; mean while I gave her *Emulſions*, *Juleps*,

Juleps, Hypnoticks: but these doing little or no good, she continued still for seven or eight dayes without Sleep, and extreamly raving, howling, and crying out continually for cold Drink: wherefore it being allowed her to drink her fill of cold Water, she became not at all the more appeased or less dry; Therefore (it being Summer) I ordered, that in the midst of the night, being taken up by Women and led forth, she should be put into a Boat, then her Cloaths being taken off, and the Cords with which she was bound being untyed, she should be dipt in the deepest part of the River, only a Cord being bound about her middle to keep her from drowning: but there was no need of that support; for she swam of her own accord almost as well as a man that had well learned: after the third or fourth part of an hour, she was taken out of the Water sound and sober, then being put to bed she slept, and sweated freely, and afterward grew well without any other Remedy. This Cure hapned so suddenly and successfully, in as much as the excesses both of the vital and animal flame being increased to a vast height together, were taken away by the proper Remedy of an intense Fire, *viz.* a Humectation and Infrigidation.

CHAP. X.

Instructions and Prescripts for the curing of Melancholy.

AS the Frensie arises from the burning of the animal Spirits, or from the inflammation of their Substance; so other affects of raving proceed from their Substance being altered after other manners, and its being changed from its genuine disposition, viz. *spirituo-saline*, into an acetous or sharp nature, resembling *aqua stygia*, or into a flatness or deadness; which therefore are either *Melancholy*, or a *Mania* or Madness, or a *Morosis* or fatuity: of which we shall now speak in order, and in the first place of *Melancholy*.

Melancholy is commonly defined, *a Raving without a Fever or Fury, joyn'd with fear and sadness*; whence it follows to be a complicated affect of the Brain and Heart; for, that melancholick Persons rave, it proceeds from the fault of the Brain, and the disorder of the animal Spirits residing in it; but that they are *sad* and *timorous*, this is attributed to the Passion of the Heart.

There

There are various and ſundry kinds of the Imagination's being depraved in Melancholy, concerning which we may obſerve in general, that the affected either rave concerning all things, or at leaſtwiſe concerning moſt, ſo that they paſs a right judgment in a manner concerning no ſubject; or they imagine amiſs only in one or two particular caſes, but of moſt others form notions not altogether abſurd. Firſt, we ſhall enquire concerning this affect, as it is more Univerſal, how the Imagination is prevaricated concerning moſt things, to wit, for what Cauſes, and with what difference of Symptoms this is wont to be done, afterward we ſhall ſpeak of the *particular raving*.

Tho the delirous affect of *univerſal Melancholy* contains manifold ſymptoms, yet they conſiſt chiefly in theſe three things; firſt, that the affected are almoſt continually occupied in thinking, ſo that their Fancy is ſcarce ever idle, and at reſt. Secondly, in thinking they comprehend fewer things in their mind than they were wont before, ſo that they often roul in their mind the ſame Object day and night, being nothing ſollicitous of other things, which ſometimes are of far greater moment. Thirdly, the Ideas of Objects or Conceptions appear often deform'd, and like frightful Apparitions as it were, and they are alwayes repreſented in a greater Species, ſo that every ſmall thing ſeems to them great and moſt difficult, and by reaſon of this horrid and unuſual appearance, the Image once conceived is not eaſily, nor ſoon let go.

The Indiſpoſition of the animal Spirits in this affect is wont commonly to be deſcribed after this manner, to wit, that whereas they ought to be tranſparent, ſubtle and light, in Melancholy they become obſcure, opake and darkiſh, ſo that they repreſent the Images of things covered as it were with a Shadow or obſcurity. But I conceive the ſtate of the animal Spirits in raving is moſt aptly explicated according to the Analogy they bear with certain chymical Spirits, as it will appear from what follows.

1. Liquours chymically diſtilled are of divers kinds, according as the active Elements are combin'd in them after various manners; the moſt excellent of theſe, by the conſent of all, is ſaid to be, in which the Spirit united to the Salt volatizes it, and is again acuated, and recieves ſomewhat of a firmneſs from it: of this nature are conceived to be the *great Elixir* and the *Liquour Alkaheſt*: and in truth, in ſome ſort are the *Spirits of Blood*, *of Harts-horn*, *of Soot*, and the like, they being very ſubtle, volatile and penetrating, and yet not inflamable, or apt to be ſoon diſſipated. And indeed the animal Spirits enjoying a ſound and meet diſpoſition, ſeem in ſome ſort to be as the ſpirituous Liquour filled with a *volatile Salt*, which is diſtilled from the Blood: unleſs it be that to this a mighty Acrimony and Empyeuma are caus'd by the Fire, of which the Liquour which is in the Brain and Nerves is wholly free.

2. Other

2. Other Chymical Liquours are too ſulphureous and burning, as Spirit of Wine and of Turpentine, which conſiſting of Spirit and Sulphur combin'd together, are eaſily inflamed and readily ſeparate from others, and take this way and that, as they find a Paſſage: of which kind of nature the animal Spirits in ſome ſort participate in the Phrenſy.

3. Some Liquours or Spirits are produc'd by Chymiſtry, in which the fixt ſalt being raiſed to a flowing has the Dominion: of which kind are thoſe which are diſtilled from Vinegar, ponderous Woods, and certain Minerals by a gentle Fire; whoſe particles are very movable and reſtleſs, but of a ſhorter activity, ſo that the *effluvia* do not flow far from them, and if they are diſtilled in *Balneo*, nothing but an inſipid Phlegm is raiſed into the *Alembick*: And indeed we conjecture that the animal Spirits have ſuch a kind of *acetous Nature* with the dominion of the *fluid Salt* in melancholy Affects, as we ſhall by and by ſhew more at large.

4. Some Liquours ſpagyrically drawn are ſometimes extreamly ſharp, in which the wild Particles of a *fluid Salt*, and of an *arſenical Sulphur* combin'd together are exalted, as are the *Stygian Waters* diſtilled from *Nitre, Vitriol, Antimony, Arſenick, Verdigreaſe*, and the like; all which are of a wild, very penetrative and invincible Nature, ſo that their *Effluvia* are agitated with a perpetual motion, penetrate any thing, and diffuſe themſelves to a great wideneſs: and theſe kinds of Liquours aptly enough reſemble the Diſpoſition of the animal Spirits acquir'd in a *Mania*, as we ſhall declare beneath.

But at preſent, that we may deliver the *formal nature and Cauſes of Melancholy*, we may opine, that the Liquour diſtilled from the Blood into the Brain (which filling and irrigating all the Pores and Paſſages of the Brain, and its nervous appendix is both the Vehicle and *Vinculum* of the animal Spirits) has degenerated from its mild, benign, and ſubtle Nature, into an acetous and corroſive Diſpoſition, ſuch as that of the Liquours drawn from *Vinegar, Box and Vitriol*, and that the animal Spirits, which diſperſing their Rayes from the *Meditullium* of the Brain, both into its globous Subſtance, and into the *Syſtema Nervoſum*, produce all the Functions of Senſe and Motion both inward and outward, are diſpoſed in like manner as the *Effluvia* paſſing from thoſe acetous Chymical Liquours. Concerning which we may obſerve theſe three things, *viz.* Firſt, that they are in perpetual Motion, ſecondly, that they do not flow far; thirdly, that they are not only carryed by open Paſſages, but make new poroſities in neigbouring Bodies, and inſinuate themſelves into them. From the Analogy of theſe Conditions concerning the animal Spirits it happens, that melancholy Perſons are always thoughtful, that they comprehend only a few things, that they form their Notions concerning them amiſs. [*you may find this fuller explained in* Dr. Willis *at large.*]

So

So much of the primary melancholy Affect, viz. a *Delirium* raiſed through the faults of the Spirits reſiding in the Brain: whoſe beginnings tho chiefly, and often in a manner only proceed from the acetous Diſpoſition of the Spirits; yet afterward the conformation of the Brain it ſelf is frequently taken in as a part of the cauſe. viz. In as much as the Recrements of the melancholy Blood, continually ſent into it, renders its ſubſtance more groſs and opake, and the primary Tracts or Paths of the animal Spirits being almoſt defac'd, new oblique and devious Tracts are made, ſo that tho there be a ſupply of the better ſort of Spirits, they cannot eaſily irradiate the Brain, or preſently recover their former Paſſages.

Melancholy is not only an affect of the Brain, and Spirits reſiding in it, but likewiſe of the *Præcordia*, and of the Blood there kindled, and thence ſent forth into the whole Body: and as it produces in the former a *Delirium*, ſo here a Fear and Sadneſs: but after what manner let us now ſee.

In Sadneſs, in the firſt place the flamy or vital part of the Soul is ſtraitned as to its circuit, and is reſtrained within a leſs ſpace; and then conſequently the animal or lucid part of the Soul contracts its Sphere, and has leſs vigour: but in Fear both are ſuddenly repreſt, and made to ſtagger as it were, and to contain themſelves within very ſmall ſpaces: in both affects the Blood does not circulate and burn lively and with a full flame, but being apt to be heapt together and to ſtagnate about the Precordia, it cauſes there an oppreſſion, or fainting; and in the mean while the Head and Members being deſtitute of its plentiful efflux, languiſh.

Now that thoſe Paſſions become habitual in melancholy Perſons, the cauſe is partly in the Blood, and partly in the animal Action of the Heart: for the Blood, by reaſon of ſaline Particles exalted, becomes leſs inflamable: whence it is neither ſufficiently kindled in the Lungs, nor does it burn within the Ductus's of the Heart and Veſſels with a flame ſufficiently clear and plentiful, but ſuch as is apt to be repreſt, and almoſt blown out by any puff of Wind: hence in regard the vital Flame is ſo ſlender and languiſhing, that it ſtaggers and trembles at all Motion, it is no wonder if a melancholy Perſon, the Soul as it were ſubſiding and being half overwhelmed, is always ſad and timorous. By reaſon of this ſaline diſcraſie of the Blood, melancholy Perſons are ſeldom troubled with a Fever, but being ſeiſed with it, they are more dangerouſly ill by reaſon of the irregular burning of the Blood.

Nor does it happen leſs through the fault of the Heart, that melancholy Perſons by reaſon of the courſe of the Blood being retarded, or often drawn back, become ſad and timorous: for ſince that Muſcle is not actuated but by the influence of weak and irregular Spirits, it is not able to perform its Contractions with Strength and Conſtancy enough, whereby the Blood may be driven forward throughout the whole Body

without ſtop, or flying back. Therefore the Blood and animal Spirits mutually affect each other with a reciprocal injury, and bring dammage on each other: the melancholy blood, that is, conſiſting of ſaline Particles exalted, together with ſuch as are ſulphureous, engenders animal Spirits of an acetous nature, as we have ſhewn: and theſe Spirits performing the vital Function amiſs, cauſe ſuch a dyſcraſy of the Blood to be encreas'd.

So far of Melancholy in general, viz. of its Eſſence, conjunct Cauſes, and chief Symptoms: before we proceed to the kinds and differences of this Diſeaſe, we ought to explicate from what cauſes both procatarctick, and evident, it is wont to ariſe and be fomented: and firſt, whence both parts of the Soul. viz. both animal and vital acquire their morbid Diſpoſitions.

Of theſe we have ſhewn the former to be acetous, reſembling Spirit of Vitriol, or of Vinegar, and the other to be *Salino-Sulphureous*, or Atrabilarious; moreover, and that as they both foment each other, ſo that they firſt engender each other: for ſometimes melancholy beginning from the animal Spirits being troubled and put ina certain confuſion, and perſiſting ſome time, brings a melancholy habit to the Blood; ſometimes alſo the Blood, contracting firſt that diſcraſy, perverts the Nature of the Spirits.

That Melancholy oftentimes begins from the *animal œconomy*, its eaſily ſeen in *exceſſive Love*, *extream Sadneſs*, *pannick Terrours*, *Envy*, *Cares*, and *immoderate Studies*, for on theſe occaſions the animal Spirits being driven out of the wonted Paths of their Expanſions, and perſiſting in their errour through the aſſiduity of their Paſſion, at length fall into devious Tracts, which afterward keeping to, they are with difficulty reduced into the ancient and right again. Moreover, ſince thereupon the Motion and Vigour of the Heart are diminiſh'd, therefore the Blood falls from its due *Craſis* and *Pneumatoſis*, and thereby being rendred more fixt and ſalino-ſulphureous, furniſhes only animal ſpirits degenerated to a fourneſs; and ſo the Blood being depraved *a poſteriori*, gives a Fuel to the melancholy diſpoſition begun by the Spirits.

Nor does it happen leſs frequently that the ſeeds of melancholy firſt laid in the Blood, give at length that taint to the Spirits: for this reaſon ſome hereditarily become obnoxious to that Diſeaſe. Moreover, a diſorderly dyet, the intermiſſion of an exerciſe long us'd, ſolemn Evacuations, as of the Menſes or Hemmorhoids, alſo of the Seed, or ſerous Ichor ſuddenly ſuppreſt, and many other occaſions, eaſily defile the Blood, and render it melancholick, whoſe evil Diſpoſition will afterward of neceſſity be communicated to the Spirits.

As to what a great many Phyſicians think, that melancholy riſes from a melancholick Humour engendred ſomewhere primarily and *per ſe* and aſſign particular Places for its Generation; viz: the Brain, Spleen, Womb,

Womb, and the whole Habit of the Body, we do not eaſily grant all this: for beſides that no ſecret Stores of ſuch a humour, lying any where, appear, unleſs haply in the Spleen, it is indeed the Blood it ſelf which firſt conceives *per ſe* the melancholick Diſtemper, or any other, and afterward depoſes recrements of that Nature in proper Emunctories or Receptacles: nor would the yellow Choler be ſtor'd up in the Gall-Bladder, or the black, ſo call'd, in the Spleen, unleſs the maſs of Blood firſt engendred thoſe Humours. If at any time theſe, or other recrementitious humours, ſome where depos'd, be receiv'd by the maſs of Blood, they produce its effervescence, but not preſently, or eaſily its diſtemperature.

1. As to that therefore, that the origine of Melancholy is ſometimes aſcrib'd to the Head, and the diſtemperature of the Brain is accus'd by ſome as too hot, and by others as cold: I think we ought rather to ſay that the affect ſometimes firſt begins from the Brain, and from the Soul reſiding in it.

2. As for the Origine of this affect being ſometimes drawn from the Womb, it muſt not be thought that the melancholy Humour is there firſt engendred, but that the occaſion of melancholy proceeds thence: either becauſe by reaſon of the *Menſes* ſuppreſt, the whole Blood being defil'd and become degenerate, afterwards falls into a melancholy diſcraſy, or for that by reaſon of the *Stimuli* of Venery reſtrain'd with a great reluctation of the corporeal Soul, the animal Spirits being long contained and kept in, at length become fixt and melancholick.

3. That melancholy is ſometimes either primarily raiſed, or very much fomented by the Spleen being ill affected, and thereupon by a peculiar word called Hypocondriacal, it is both the common and our own Opinion; but the Blood being firſt in the fault, engendring in it ſelf filthy melancholy Dregs at the beginning, depoſes them in the Spleen, which afterward receiving again, being exalted into the nature of an evil ferment, it is vitiated more in its Craſis by their defilement.

4. As to that that beſides, another ſpecies of melancholy, diſtinct from the Hypocondriacal and the former, is ſaid to be engendred together in the whole Body, it is nothing elſe than that the whole maſs of Blood becoming degenerate from its right Nature, by reaſon of errours in the *ſix non-natural things*, and on many other occaſions, acquires a melancholick Diſcraſy (that is, where the Spirit being depreſs'd the ſulphureous Particles together with the ſaline, and ſome alſo that are terrene are exalted) this melancholy diſpoſition of the Blood being very much allyed to that *ſulphureo-ſaline* Habit, which we have ſhewn to be often prevalent in a certain kind of Scurvy.

The *Prognoſtick* of *Melancholy*, tho, as to Life or Death, it be for the moſt part ſafe, yet, in reference to the event, it is very uncertain; for ſome recover ſoon, others are not cur'd but after a long time, and others not at all.

This affect, rais'd on a ſudden from ſome ſolemn evident cauſe, as from a vehement paſſion, is much ſafer than invading by degrees after a long *Procatarxis*: for if the evident cauſe be preſently remov'd, that often ceaſes of its own accord, or is cur'd with little ado; but in this, in regard both the maſs of Blood, and the whole troop of Animal Spirits have fallen from their due *craſis*, and often the conformation of the Brain, as to the tracts of the Spirits, is altered, a Cure does not happen but with great difficulty, and not but after a long time.

Melancholy long protracted often paſſes into a Fatuity, and ſometimes alſo into a *Mania*, or Madneſs: Moreover, ſometimes it brings Convulſive affects, or a Palſey, or Apoplexy, nay, ſometimes a violent Death.

There is little or no hope of a Cure, if the affected, being very ſtubborn and refractory, refuſe all Medicines, and any method of management: Moreover, ſcarce any thing better may be expected from thoſe, who being ſick of Diſeaſes in a manner only imaginary, take any Remedies, and often require many, and of divers kinds, to be given them.

The *Cure of Melancholy*, as it is always difficult and long, ſo it is wont to be very intricate and perplex'd; ſeeing that in reſpect of the *cauſes* of every kind, *evident*, *procatarctick* and *conjunct*; alſo by reaſon of the *ſymptoms* daily emerging, it ought to be diverſly taken in hand, and often to be varied: Nor muſt we only change the Remedies and m thod of Cure, but variouſly intermix with them advices, deceptions, flatteries, entreaties, and puniſhments.

But in the firſt place let the *evident cauſe of the Diſeaſe*, if any notable one has preceded, be ſearch'd out; and if it may be, let it either be preſently remov'd, or let the removal of it be ſome way counterfeited: Moreover, let the violent paſſions of the mind thence rais'd, either be appeas'd, or be ſubdued by others that are oppoſite. Wherefore in an exceſſive paſſion of Love, Indignation and Hatred come in as a relief; to Sadneſs, let baits of Pleaſures, Muſick, the deſire of vain Glory, be oppos'd, or alſo a pannick terrour: In like manner you may proceed with other Paſſions, either for curbing, or eluding them.

The *Therapeutick Method*, fitted to the Cure of *Melancholy*, ſuggeſts many other Indications: Whereof the chief, and to which the reſt may be beſt reduc'd, are thoſe three ſo vulgarly known, *viz.* the *Curatory*, which regards immediately the *Diſeaſe*, and its *Conjunct cauſe*; the *Preſervatory*, which regards the *procatarctick and evident cauſes*; and the *Vital*, which is occupied in *preſerving* the *ſtrength*.

As to the firſt *Indication*, the Phyſical Intentions will be, ſo far to raiſe, volatize and corroborate the Animal Spirits, being become fixt,

or

or dejected alſo, and apt to act overthwartly, or go aſtray, that afterward being more freely expanded, they may irradiate the whole Brain with a full and ſtedfaſt beam of Light, for the acts of the Imagination, Judgment, and the other chief Faculties; and may ſo vigorouſly actuate the *Præcordia*, and make them vibrate ſo ſtrongly, that the Blood being plentifully kindled may thence ſpring forward without ſtop or reſtagnation throughout the whole Body.

Therefore, for the *cure of the Spirits*, let it be chiefly procur'd, that the Soul be withdrawn from the troubleſome and forc'd Paſſion, viz. from *exceſſive Love*, *Jealouſie*, *Sadneſs*, *Commiſeration*, *Hatred*, *Fear*, and the like, and be compos'd to a Cheerfulneſs and delight: let a merry or *jocoſe Diſcourſe*, *Singing*, *Muſick*, *Painting*, *Dancing*, *Hunting*, *Fiſhing*, and other pleaſant Exerciſes be brought in ure: thoſe to whom Delights, or Sports are not pleaſing (for theſe are always ungrateful to ſome melancholy Perſons) may be put upon ſome light Employs; mathematical or chymical Studies, ſometimes alſo travelling does great good; moreover it is often profitable to change the Places of their Habitation in their native Soyl. Thoſe, who muſt always ſtay at home, ſhould be adviſed to look after their houſhold Affairs, and govern their Families; to cultivate and order their Houſes, Gardens, Orchards and Fields: for a Mind, employed in neceſſary Cares and Offices, more readily depoſes vain or mad Thoughts, and at length quits them: Let melancholy Perſons be ſeldom left alone, for if at any time they are permitted to follow and dwell long on their Phantaſms, and aereal Speculations, the Soul ſubſides within, and leaving the Body, and undergoing a certain *Metamorphoſis*, indues a new ſpecies, and often contrary to the ſtate of Man; wherefore the affected ought to be continually diſturbed by the diſcourſes of their Friends and Acquaintance, to wit, that the animal Spirits being call'd outward from their bye wayes, be brought again into their former and uſual Tracts. But if the diſeaſed, being ſeduc'd by fantaſtical Illuſions, imagine and firmly believe certain prodigious things of themſelves; the Mind is to be withdrawn from thoſe things by artificial Inventions, of which manner of Cures there are many Caſes and Examples to be found in Books, and a prudent Phyſician may invent the like as occaſion requires.

Tho a melancholy new contracted is ſometimes cur'd by a meer ordering and management of the Mind and the animal Spirits, yet in a long continued or inveterate melancholy, where the Spirits have contracted an acetous Diſpoſition, and the Blood an atrabilarious dyſcraſy, and that the Conformation of the Brain, as to its Pores and Paſſages is injured, and other indications, called preſervatory, are required for removing the procatarctick Cauſes of the Diſeaſe. Concerning this thing, the Phyſical intentions muſt be in the firſt place to reduce the Blood to a better and genuine, to wit, a *ſpirituo-ſaline Craſis*; and then to give a vigour to the Brain, and, its Pores being opened, to render it clear

clear and diaphanous, and withall to ſtrengthen the animal Spirits, and to ſtir them up to a vigorous Emanation: for which ends I propoſe the following Method, which nevertheleſs ought to be varied according to the various Conſtitutions of the diſeaſed.

Blood-letting has place in a manner in every melancholy, and ſometimes it is often to be repeated, for the aduſt and effæte Blood being withdrawn at times, a new and more ſpirituous Blood ſprings up in its place. Concerning the Quantity, Place, and Wayes of adminiſtring this Remedy, Authors are of various Opinions; but the Motion and Affects of the Blood being duely weighed, it may ſuffice firſt to draw an indifferent quantity of it from the Arm, and afterward, if need be, a leſs, either from thence, or from the Veſſels of the Fundament by Leeches: how the opening of the *Salvatella Vein* ſhould give ſo notable a releif, as is ſaid, I confeſs is unknown to me: if melancholy Perſons are ſtrongly perſwaded that blooding there will cure them before any where elſe, haply it may do them good: a frequent opening of the *Hemorrhoid Veſſels* induces Nature afterward to endeavour that evacuation, which ſpontaneouſly hapning (as *Hippocrates* tells us) often cures this diſeaſe.

Purging ought to be uſed from the beginning, and to be repeated by intervals, in regard it withdraws the fewel of the diſeaſe from the firſt Paſſages, and removes the impediments of other Remedies: as to what ſome judge, that for the ſpeedy eradicating of the Diſeaſe, we muſt chiefly uſe *Hellebore*, or the *Spurges*, and quote *Hippocrates* their Author, thoſe things, if the ſucceſs be look'd upon, are not found ſo generally to agree; but that they often very much injure the Diſeaſed: for ſtrong *purgers* do not take away the cauſe of the Diſeaſe, to wit, the dyſcraſy of the Blood, but rather encreaſe it: moreover, they farther weaken and proſtrate the animal Spirits before dejected. *Hellebore* is ſo frequently preſcribed by *Hippocrates*, becauſe ſcarce any other Catharticks were then known, at leaſt wiſe they were not in common uſe; but now it is far better to draw gently from the receptacles of the Humours by ſuch as are mild and without roughneſs, and to cleanſe the Viſcera and firſt Paſſages without troubling much the Blood and Spirits.

Vomitories (as in moſt Cephalick Diſeaſes, free from a Fever) are wont to give relief after a peculiar manner in any ſorts of *Diſtractions*; the reaſon of this partly conſiſts herein, that the viſcous load of the Ventricle, which (as we have ſhewn elſewhere) greatly oppreſſes the mind, being cleans'd forth, the Spirits thereupon being more free, expand themſelves more vigorouſly and cheerfully. Moreover, in as much as vomiting compreſſes and evacuates the neighbouring Receptacles of the Humours, to wit, the *Gall-bladder*, the *Ductus* of the *Pancreas*, and the *Glands* of the *Meſentery*, it keeps their Contents from being conveyed to the Head.

Vomits.

Vomits.

Take Oxymel of Squills an ounce and a half, wine of Squils an ounce, Syrup of Tobacco two drams, mix them, make a Vomitory: if it works not at all, or ſlowly, let a Vomit be rais'd by a free drinking of Poſſet-drink having the leaves of Carduus boyl'd in it.

Take of the decoction of the middle bark of Elder four ounces, Salt of Vitriol from one ſcruple to two ſcruples, Oxymel ſimple three drams, mix them: let it be taken after the ſame manner.

To ſtrong and well ſet People, *give the Infuſion of Crocus Metallorum, or Mercurius vitæ; alſo the Emetick Tartar of Mynſicht, or Sulphur of Antimony.*

Take roots of Polypody of the Oak half an ounce, Epithymum three drams, Senna half an ounce, Tamarinds ſix drams, Coriander-ſeeds, three drams, yellow Saunders two drams, let them boyl in fourteen ounces of Fountain-water to ten ounces: adding Agarick two drams, Rhubarb a dram and a half; to the clarified ſtraining add of the purging Syrup of Apples two ounces, let ſix ounces be taken, repeating it within three or four dayes.

Take choice Senna three drams, Epithymum, Rubarb, of each a dram and a half, yellow Saunders half a dram, Coriander-ſeeds two ſcruples, Salt of Wormwood half a dram, Celtick Spike a ſcruple, let there be a cloſe Infuſion for a Night in White-wine and water of Apples, of each four ounces; to five ounces of the clear ſtraining add Syrup of Epithymum ſix drams, Aqua mirabilis two drams, mix them, make a potion. In Bodyes hard to be wrought on, let there be added to theſe, fibres of black Hellebore macerated in Vinegar, a dram or two.

Thoſe who like better *Pills, Powders, Bolus's or Syrups*, may uſe the following.

Take Quercitan's Pills of Tartar, or Crato's Pills of Amber, half a dram, Roſin of Jalap, or Scammony, ſix or eight grains, Tartar vitriolate half a ſcruple, Ammoniacum diſſolved in Aqua mirabilis what ſuffices, make pills, let four be taken going to bed, and, unleſs they work firſt, one the next morning.

Take Calomelanos, extract of black Hellebore of each a ſcruple, Roſin of Jalap ſix grains, Ammoniacum diſſolved what ſuffices, make four Pills, let them be taken with governance.

The Powder call'd Haly, is greatly commended by Valeſcus de Tarenta, Pereda, and others. And indeed in ruſtick or robuſt Bodies, this ſeems a pretty fit Cathartick. Take Epithymum half an ounce, Agarick, Lapis Lazuli of each three drams, Scammony a dram, Cloves in number thirty, make a Powder, the doſe is from half a dram to a dram.

Take Pulvis Diacennæ, Diaturbith with Rhubarb, of each half a dram, make a powder, let it be taken in a draught of poſſet-drink, or in a ſingle decoction of Epithymum, to four or five ſcruples.

Take

Take choice Senna two ounces, roots of Polipody of the Oak two ounces, Epithymum an ounce and a half, yellow Saunders half an ounce, Tamarinds an ounce, Coriander-seeds six drams, let them boyl in four pounds of Barnet-water, to an half, strain it, and let it evaporate by a bath heat to the consistency of a Syrup, adding towards the end pure Manna, double refin'd Sugar, of each four ounces, make a Syrup: the dose is two or three spoonfuls, in three ounces of a convenient distill'd water, or in any other Liquor. Or,

Take of the same Liquor evaporated to the consistency of Honey, six ounces, fresh Cassia four ounces, pulp of Corinths two ounces, Cream of Tartar, Salt of Wormwood, of each a dram and a half, pulvis Diasennæ two drams, yellow Saunders powdred three drams, mix them, make an Electuary, the dose is from three drams to half an ounce.

*Cathartick*s must not be used without intermission, nor too frequently, but let it suffice to give them within six or seven dayes, and at other times, let the belly, if it be bound, be loosened by Clysters: as to what regards other Medicines which do not evacuate, tho the Ancients plac'd the least, we put the greatest stress of the Cure in them; for they (with whom also many Moderns accord) concluded, that there was nothing more to be done for curing Melancholy, than to purge forth the atrabilarious Humour: Wherefore making *purging* the thing of chiefest moment, they ordered the rest of *Pharmacy*, called by them *preparatory*, only for the sake of this; directing thus their intentions, that as soon as the Humour was brought to a fit consistency by *altering* Medicines, and the wayes made open enough for its excretion, then to carry it forth by Cathartick*s*: which kind of *hypothesis* seems not to agree with Reason or Physical Experience, to wit, in as much as melancholy Persons, after a frequent purging, how methodically soever ordered, receive rather an injury than a relief. Therefore we, placing the cause of this Disease in the dyscrasies of the Blood and Spirits, and in the weakness or ill conformation of the Brain or Viscera, put *alteratives*, and *corroboratives* in the first rank of Medicines, and sometimes interlace *Cathartick*s only for the sake of these. *Purging* therefore being prescribed for the due removal of Impediments, and at due intervals of time, as to the rest you may proceed after this manner.

Take Conserve of Clove-gilliflowers and Borage flowers, of each two ounces and a half, myrobalan rinds condited six drams, Coral prepar'd, Pearl, of each a dram and a half; Ivory, Crabs-eyes, of each a dram, Confection of Hyacinth two drams, Syrup of Coral, or red poppyes, what suffices, make an Electuary, let two drams be taken, morning and evening, drinking after it three ounces of the following Julep, or distill'd water.

Take water of Cowslip-flowers and of Black-cherries, of each six ounces, of Bawm four ounces, Dr. Stevens's Water two ounces, Sugar six drams, mix them, make a Julep.

Take

Take leaves of Bawm, Borage, Bugloss, Fumitory, Water-cresses, Brook-limes, of each four handfuls, Clove-gilliflowers, flowers of Marigolds, Borage, Cowslips, of each three handfuls, the outward coats of six Oranges and four Lemmons, being all sliced and bruis'd, pour to them of Whey made with Cyder, eight pounds, distill them with common Organs, let the whole Liquor be mixt.

Take powder of Pearl, Ivory, Coral prepar'd, of each two drams, Species lætificantis, Diarrhod. Abbatis of each a dram, Oyl of Citron-pills half a scruple, double refin'd Sugar dissolv'd, and boyl'd to a consistency for Tablets in a sufficient quantity of Bawm-water, six ounces, make Tablets according to art, weighing a dram, let two or three be taken in the morning and at five of the clock in the afternoon, drinking after it a draught of the distilled water, or of Tea. Or,

Take Roots of Chervil, Polypody of the Oak of each an ounce and a half, leaves of Harts-tongue, Spleenwort, Ceterach, Germander, of each a handful, Tamarisk half a handful, bark of the same half an ounce, Raisins ston'd two ounces, one Apple sliced, being sliced and bruis'd let them boyl in four pounds of Fountain-water to a consumption of the third part, towards the end add leaves of Water-cresses a handful, strain it and clarifie it, let six ounces be taken twice or thrice a day, let it be sweetned with Syrup of Fumitory.

Iron-Spaw-waters are wont to contribute egregiously to the Cure of Melancholy Persons; viz. in as much as being plentifully drank, they wash away the *salino-sulphureous* tincture of the Blood, and destroy its evil ferments. Moreover, they cleanse the filth of the Viscera, open obstructions, and which is of mighty benefit, by their astriction they both strengthen the weak or over-lax Viscera, and close the mouths of the Vessels gaping into the Brain, that a passage may not lye open into it for the extraneous matter, together with the nervous Juyce: and in this respect, to wit, by corroborating the Viscera, and closing the passages into the Brain, *Vitriolick Preparations of Iron* are wont to be given with good effect in *Melancholy*, and also in the *Vertigo*.

Take our Steel prepared three ounces, infuse it in two pounds of the water above prescribed, let three or four ounces be taken twice a day by it self, or with some other solid Medicine.

Take filings of Steel an ounce, put them in a Glass with two ounces of the Juice of Oranges, let it stand for a day, shaking it now and then, then pour to it water of Apples, and White-wine of each a pound, or of small, and mild Cider two pounds, let three ounces be taken twice a day after the same manner.

Take Vitriol of Mars, Cream of Tartar, Crabs Eyes, of each a dram, mix them, make a powder, divide it into nine parts, let one part be taken every Morning in a draught of an appropiate distill'd Water, or a Decoction, or appropriate Julep.

Take Syrup of Steel four ounces, let a ſpoonful be taken twice a day in a fit vehicle.

Take extract of Steel, from our Steel prepared with an appropriate Decoction three ounces, powder of Ivory, yellow Saunders, Lignum Aloes of each half a dram, Salt of Tartar two Scruples, Ammoniacum diſſolved in Water of Earth-worms what ſuffizes, make a maſs, let it be made into little Pills, let three or four be taken every Evening, drinking after it three ounces of Water of Apples or of Cowſlip-flowers.

Whey, if it agrees with the Stomack, being drank plentifully for many dayes, is often uſed with good effect, for the like reaſon as Spaw-waters. viz. by waſhing away the ſalt and ſulphureous Particles of the atrobilarious Blood: Whey with Epithymum infuſed, or boyled in it, is egregiouſly commended by ſome.

Let Broaths be prepared of the Decoction of a Chicken, with the Roots of Polypody, Chervil, Fennel, Butchers-broom, and the Leaves of Ceterach, Hartſtongue, Scolopendrium, &c. let a draught be taken in the Morning and at five of the Clock in the Afternoon, in which diſſolve Vitriol of Mars from ſix grains to ten, Salt of Wormwood, Cream of Tartar of each a ſcruple.

Juices and Expreſſions of Herbs ſometimes contribute egregiouſly to the taking away of the Dyſcraſy of the Blood. Take Leaves of Borrage, Watercreſſes of each ſix handfuls, two Apples maſh'd, the pulpe of two Oranges, double refined Sugar an ounce, all being bruiſed together pour to them of excellent Cyder a pound and a half, make a ſtrong expreſſion, let it be kept in a Glaſs, the doſe is four ounces twice or thrice a day.

In the Summer, a Bath of ſweet Water, inaſmuch as it cleanſes the filth ſticking in the Skin, and promotes inſenſible tranſpiration, does great good to ſome.

Becauſe *Melancholy* perſons *Sleep* with difficulty, and after long or frequent watchings are worſe, therefore let *Anodynes*, and ſometimes gentle *Hypnoticks* be preſcrib'd to be taken late at night, when there is need. For this purpoſe, *a decoction of Cowſlip-flowers or of the leaves of Lettices, or the diſtill'd water of the red Poppey*, or *Syrup of the ſame*: Moreover, *Emulſions of the ſeeds of the white Poppey, Syrupus de Meconio*, and other things that are mild, and ſoothing the Spirits, are proper.

There being an infinite number of Melancholick perſons, as well as of Fools, I ſhall illuſtrate our *hypotheſis* only with *two examples*, in one of which the Diſeaſe began from the ſenſitive part of the Soul, or from the *Animal Spirits*, and in the other from its Vital part, to wit, from the *Blood*.

Some time ſince a renowned man, about forty years of age, of a florid countenance, chearful, and quick at all buſineſs, being afflicted in mind, and very much dejected by reaſon of ſome misfortunes, became thenceforward very ſad and melancholy, with a dead

and

and fallen aſpect: When firſt I went to ſee him, he complain'd of much trouble and diſtraction of his thoughts, which were ſo great, that his Fancy being occupied day and night without intermiſſion, he liv'd wholly without ſleep: and nevertheleſs this Perſon minded not at all the concerns of the Publick, nor of his own Family, nor was he greatly ſollicitous concerning the welfare of his Soul, or the health of his Body, but rather was continually perplext about petty things, and almoſt of no moment: he was ſo fearful of all things, that he fancied ſome harm, or Death would preſently happen to him upon any little accident. In fine, he always liv'd ſo ſad, as tho he endeavour'd to exceed *Heraclitus* in mourning. Moreover, he was troubled with ſo great a ſtraitneſs and conſtriction of his Heart, that it ſeem'd to him as tho the whole *Præcordia* were moſt cloſely ſtrain'd together as a firſt contracted, and he thought that he always carried a vaſt and very oppreſſive burthen there, which forc'd him always to go forward, and ſtooping towards the Earth. Whilſt he was diſcourſing with his friends, that conſtriction and oppreſſion of the *Præcordia* was wont ſomewhat to remit; but then upon any unuſual object ſtriking him with a terrour, it returned with more violence: Nor was he only troubled with a certain conſtriction in the *Precordia*, but in the whole Body beſides, and a certain weight, as it were, ſeemed to lye on the Region of his Loyns, alſo on his Shoulders and Arms.

As to the Cure of this Perſon, after various Medicines us'd without any great ſucceſs, at length I perſwaded him, becauſe it was Summer, to drink *our artificial Spaw-waters* for ſix weeks: Therefore in the firſt place, *in four pounds of Fountain-water*, I infus'd for a night, *of our Steel prepar'd half a dram*, and afterward as much in eight pounds of Water. The Diſeaſed every morning drank the clear Liquor, and within four or five hours diſcharged the greater part of it by Urine. He took moreover going to Bed, and early in the morning, *a dram of an appropriate Electuary*, ſuch as above-deſcribed, *with a Cephalick Julep*: Within two months he was much better, and afterward came to himſelf by degrees.

Whilſt I was writing theſe things, a young man of Quality, lately returned from travelling beyond the Seas, and being become ſickly, committed himſelf to our care: This Perſon, being formerly of a ſanguine and chearful temperament, of a gay behaviour, alſo of an acute wit and a clear diſpoſition, as he travelled through Foreign Countries, and being in a certain Summer in *Spain*, he felt in himſelf a great alteration from the intenſe heats of that place: For firſt, he became obnoxious to frequent effervescencies of the Blood, with ſudden flushings of heat in the palms of his Hands and the ſoles of his Feet, and to prickings often wont to ariſe in his whole Body, and preſently to go away again. Afterward, finding himſelf worſe as to his Appetite

and Sleep, and likewiſe growing *dull* and *ſomewhat ſad*, he began to affect leſs, and ſometimes to ſhun any buſineſs or delights, nay, and converſation with his friends. At length this indiſpoſition daily growing worſe, without any manifeſt cauſe, or real trouble of mind, he became *Melancholick*, ſo that always being thoughtful, fearful, and ſad, he took delight in nothing: For Studies, Exerciſes, Travelling, Converſation with learned men, and all other things which before he delighted in, were then wont to be a trouble or terrour to him: Being affected after this manner for two years, he was ſo much changed from himſelf, as tho he were another man: In order to a Cure he conſulted the moſt skilful Phyſicians of *Spain*, *France*, *Holland*, and of late in *Ergland*, and tryed various methods of Curing, tho ſcarce with any benefit. To wit, that melancholy Diſcraſy of the Blood, firſt contracted by the diſtemper of the Air, continuing ſtill, cauſed Spirits of an acetous nature, as it were, to be ſupplied to the Animal œconomy. In the firſt place I thought good to commend to this Perſon the following Remedies.

Take Gerion's decoction of Senna (with Tamarinds half an ounce) four ounces, Purging Syrup of Apples an ounce, Aqua mirabilis two drams, mix them, let him take it with governance, repeating it within nine days: after Purging let Blood be drawn with Leeches, to three ounces.

Take of our Syrup of Steel ſix ounces, let a Spoonfull be taken in the morning, and at five of the Clock, in three ounces of the following Liquor, walking upon it for an hour or two.

Take leaves of Baum, Borrage, Bugloſſe, Burnet, Meadow-ſweet, Harts-tongue, Water-creſſes, of each four handfuls, roots of Borrage half a pound, Clove-gilliflowers, Marygold flowers of each three handfuls, the outward rinds of eight Oranges and four Lemmons, Mace half an ounce, being ſlic'd and bruis'd pour to them of Whey made with Cyder eight pounds, diſtill it with common Organs.

Take Conſerve of Clove-gilliflowers, the flowers of Betony and Borrage of each one ounce and half, Pearl powdred two drams, red Coral prepared a dram and a half, Species of the Confection of Hyacinth two drams, Syrup of Coral, and red Poppyes of each what ſuffizes, make an opiat, let the quantity of a Cheſnut be taken every Evening, drinking after it two or three ounces of the water of Cowſlip flowers.

After ſixteen or twenty dayes, *the method of alteratives* being changed, inſtead of theſe let him take the following. *Take powder of Ivory, Pearl, red Coral prepared of each two drams, Roots of male Peony a dram and a half: Lignum Aloes half a dram, Orange Tablets four ounces, a ſolution of Tragacanth made in Baum-water what ſuffiſes, make Tablets weighing half a dram, let four be eaten in the Morning, and at five of the Clock drinking after it a draught of Tea.*

Take of the ſame Powder without Tablets half an ounce, Flowers of Sal Armoniack, Salt of Coral of each a dram, with Chios Turpentine ſix drams,

drams, make a maſs, let half a dram be taken Morning and Evening, drinking after it three ounces of the diſtilled Water.

Let him feed only on Food of a good Juice, and of an eaſie Concoction, let him drink ſmall Ale, with the *Leaves of Harts-tongue* infuſed in it, he may ſip a little now and then of *Wine with Water in it*, or of *Cyder*. Let him lead his Life continually occupied ſometimes in eaſie Employs, ſometimes in moderate Exerciſes, or Recreations of various kinds.

So far of univerſal Melancholy, in which the diſeaſed are in a manner indifferently affected by any Object, ſo that in every place, by any Accidents and Circumſtances they are continually perplext with a multitude of Thoughts, with a Raving, Fear and Sadneſs.

A Melancholy is ſaid to be *Special*, when the diſeaſed have regard to ſome particular thing, or to ſome certain kind of things: of which they in a manner alwayes think, and by reaſon of all the Powers of the Soul being continually ſpent in this one thing, they live always penſive and ſad: Moreover, they have abſurd and incongruous Notions, not only concerning that Object, but alſo concerning many other Accidents and Subjects. In this affect the corporeal ſoul being altered from its proper Species, aſſumes a certain new one, and being not conformable to the rational Soul, or to the Body, or to it ſelf, it undergoes a certain Metamorphoſis.

There are two kinds of occaſions, from which a particular Melancholy chiefly and moſt frequently ariſes; viz. firſt, if at any time ſome ſevere preſſure of an Evil preſent or at hand (whether it be true or imaginary) lyes upon the Soul: or ſecondly, if the privation of a good before obtained, or the deſpair of that which is deſired happen: In theſe oppoſite Caſes the corporeal Soul either being allur'd outwardly omits all domeſtick care of it ſelf, or of the Body, or of the rational Soul: or being inwardly compreſs'd, it leaves or perverts the offices both of the Reaſon and of the Vital and Animal Function. It were a thing of an immenſe Labour to enumerate the various Caſes and wayes of affecting in both kinds; among the mighty ſtore of them, thoſe which being of greateſt moment ſeem chiefly to require a phyſical help, are a furious Love, Jealouſie, Superſtition, deſpair of eternal Salvation, the imaginary Metamorphoſis of the Body, or of its Parts, or the fantaſtical Goods or Evils of Fortune; we ſhall ſpeak briefly of each of theſe.

It is a vulgar and moſt common obſervation, that if any one once being taken with the Aſpect and Converſation of a Woman, begins inwardly to be love-ſick for her, and to deſire her earneſtly, and for his moſt devoted affection gets nothing but denials and Contempt, unleſs he be upheld by a very ſtrong Reaſon, or being ſeized by other affections, be turned another way, as it were, there is great danger leſt he fall into a *Love-melancholy*; with which Paſſion if he happen to be affected

affected, presently he seems transformed from himself into a living Statue, as it were, he thinks or speaks of nothing but his *Mistris*; he seeks to put himself upon any of the greatest dangers of Life and Fortune for her sake; mean while he does not only neglect the care of Domestick or Publick Concerns, and even of his own Salvation, but, being frustrated of his Desire, often layes violent hands on himself; or if he be content to live and survive, pining away both in Body and Mind, he almost deposes man; for the use of right Reason being lost, omitting Meat, Drink, and Sleep, and the other necessary offices of Life, he yields up himself wholly to sighing and sobbing, and to a mournful habit and gesture of Body.

If we enquire into the reason of this affect, we easily find, that the Corporeal Soul of Man being obnoxious to violent Passions, when it is wholly carried forth into an Object most dear to it, *viz.* a Woman belov'd, and is not able to get and embrace her, it is delighted, or contents it self with nought besides, also paying no obedience to the Rational Soul, it wholly grows deaf, and does not hear its Dictates; and crowding the Imagination only with Tragical Notions, it dulls the edge of the Understanding. Moreover, in as much as the *Præcordia* (a plentiful afflux of Spirits being denied to them) fail as to their Motions, the Blood heap'd together in the *Sinus*'s of the Heart, and apt to stagnate, causes there a great heaviness and oppression, and consequently Sighs and Groans; mean while the Face and outward Members, by reason of the afflux of Blood and Spirits withdrawn from them, grow pale and languish: hence it is commonly said of Desperate Lovers, that *their Heart is broken*; to wit, in as much as this Muscle being not vigorously enough actuated with the Animal Spirit, vibrates slowly and weakly, and does no longer send forth the Blood with vigour into all the Parts.

Such disorder of the animal Function as an excessive Love brings concerning the Acquisition of its Object, the like in a manner is brought by Jealousy concerning the keeping of the same when gotten: so that always (viz. both in the Fruition and in the Desire)

Res est solliciti plena Timoris Amor.

That Soul, if it be not secure of its most dear prey, presently growing troubled, casts a Cloud and Darkness on its own sereneness: and afterward, being infected with a *bilous Tincture*, every Object seems to it ting'd of a yellow colour: for as a ferment of the Stomack grown sharp perverts all things taken into it into its own Nature, so the affect of jealousy once risen, turns all Accidents and Circumstances to a food for its own venom: and since in this affect the sensitive Soul being bent awry as it were, does not become conformable to its Body, therefore the œconomy of the Animal, Vital, and vegetative Functions, being depraved, the jealous Man raves and pines away.

&c.

Superſtition and *deſpair of eternal Salvation* are wont to imprint almoſt the like affects of Melancholy on the ſenſitive Soul, the Blood, and the Body, as Love and Jealouſie, but ſomewhat after a differing way of affecting; for in *thoſe* the Object whoſe acquiſition or loſs is in danger, is wholly immaterial, and its affect being firſt conceiv'd by the Rational Soul, is imprinted on the other Corporeal Soul; in the proſecution of which, if this readily obeys, then no diſturbance of the mind of Man ariſes; but if the Corporeal Soul ſhewing a reluctancy, (as it often falls out) the Rational ſtill preſſes with advice and threats, preſently that growing troubled, ſtirs the Blood and Spirits in a diſorderly manner, oppoſes the Corporeal goods and delights to the Spiritual, preſented by the Underſtanding, and endeavours to draw the man to its ſide. And as thus there is a continual bickering between the two Souls, and ſometimes the Will is ſuperiour, ſometimes the Senſitive Appetite prevails; at length a Court of Conſcience is ſet up by the Mind, where every act is narrowly examined; By reaſon of theſe frequent variances of the Souls, the Animal Spirits, as being too much, and almoſt continually exercis'd, being often commanded, and as it were diſtracted, now this way and now that way, at length fall ſomewhat from their vigour and good diſpoſition, and at laſt being become fixt and melancholick, in as much as they are with-held from their wonted Expanſion, they form bye and unuſual Tracts in the Brain, and ſo bring a *Delirium* with a mighty Fear and Sadneſs; in thoſe kinds of affects the corporeal Soul being violently drawn away as it were, both ſeparates from the Body, and being modified according to the character of the *Idea* imprinted, is wont to aſſume a new Species either *Angelical* or *Diabolical*; mean while the Underſtanding, for as much as the Imagination ſuggeſts to it only diſorderly and monſtrous Notions, is wholly perverted from the uſe of right Reaſon.

After a like manner of affecting as this, it happens that ſome melancholy Perſons undergo imaginary Metamorphoſes either as to their Fortunes or their Bodies. viz. Whilſt one imagines himſelf, and acts a Prince, another a Beggar: another believes himſelf to have a Body of Glaſs, and another thinks himſelf a Dog or a Wolfe, or ſome other Monſter; for after that the corporeal Soul being affected with a long continued melancholy, the Mind being blinded, is wholly fallen both from it ſelf and the Body, ſhe affects a new Species or Condition, and, as much as in her lyes, really aſſumes it.

CHAP.

CHAP. XI.

Inſtructions and Preſcripts for curing Madneſs, or the Mania.

After *Melancholy*, it remains for us to treat of *Madneſs*, which is ſo far ally'd to the other, that theſe affects often change turns, and each paſſes into the other; for a *melancholy diſpoſition* growing worſe brings a *Fury*, and a *Fury* coming to abate, often ends in a *melancholy diſpoſition*.

Since *Madneſs*, raiſed without a Fever, and with [illegible]ighty annoyance of the animal Function, is wont to be continual [illegible]d long-laſting, its next and immediate ſubject muſt be the *animal Spirits*; which being affected not *per conſenſum*, nor by another thing forcibly moving them, but *per ſe*, and habitually, fall from their proper and genuine Diſpoſition, viz. *ſalino-ſpirituous*, into a *ſalino-ſulphureous* nature, reſembling *Aqua Stygia*, as we have hinted before: and conſequently they exert none but diſorderly Actions, and continue ſo acting amiſs for a long time: to this their Fault haply the Brain, the Blood, or other parts contribute ſomething, but the Spirits themſelves are firſt, and chiefly in the fault.

Concerning Maniacal Perſons we muſt obſerve, that theſe three things are in a manner common to them all, viz. Firſt, that their Fancies or Imaginations are perpetually occupied with the raging of impetuous Thoughts, ſo that mumbling to themſelves, or crying out and yelling, they talk aloud various things both Day and Night. Secondly, that their Motions, or Conceptions are either incongruous, or are repreſented under a falſe or erroneous Species to them. Thirdly, that with their raving a Boldneſs and Fury are moſt commonly joyned, contrary to what it is in melancholy Perſons, who are always affected with a Fear and Sadneſs.

The Depravation or maniacal Diſpoſition of the animal Spirits, together with the Juice irrigating the Brain, is wont to ariſe after various manners, and for divers cauſes; but for the moſt part that affect (as we have obſerved in Melancholy) begins either from the Spirits themſelves, or from the Blood.

1. A madneſs beginning from the Spirits, ſometimes ariſes from a ſolemn evident cauſe, as from a violent Paſſion, ſometimes alſo it proceeds from a Procatarxis laid in the Brain, as when it happens upon Melancholy or a Frenſy; Let us confer a little the Caſes, Reaſons, and the various wayes of the coming to paſs of both.

1. As

1. As to the former, when a vehement Paſſion turns any one from his right mind, that ſo happens to be done either becauſe the Animal Spirits are too much caſt down, and driven into confuſion, or becauſe they are raiſed above meaſure, and endeavour to expand themſelves beyond their Sphere.

1. The Spirits are wont to be caſt down by a violent and terrible Paſſion; ſo it many times happens, that ſome upon a real or imaginary ſeeing of a Ghoſt, preſently being ſtruck with a pannick terrour, fall into a perpetual madneſs. Moreover, ſome, by reaſon of ſome great diſgrace, or reproach, others by reaſon of the hope of an exceſſive Love being fruſtrated on a ſudden and unexpectedly, and others by reaſon of Vows raſhly broken, and their Conſcience being violated, firſt being mightily diſturbed in Mind, become ſhortly after mad: the reaſon whereof is, that the animal ſpirits being driven out of their ranks and uſual Paſſages, and put in a Confuſion, frame new and bye wayes for themſelves, which entring, they preſently form delirous Phantaſms: mean while the ſaline Particles of the nervous Juice fall from their volatility, the ſpirituous being depreſs'd, and coming to flow, take to them the ſulphureous Corpuſcles ſent from the Blood into the Brain, being then weak and open; whence this Liquour preſently becomes moſt ſharp like *Aqua fortis*, and the animal Spirits exorbitant, and very much troubled.

Secondly, the animal Spirits, ſometimes, whilſt they are raiſed too much, almoſt after the like manner, bring both to themſelves, and the nervous Juice, a Diſpoſition to Madneſs; hence Ambition, Pride and Emulation have made ſome run mad; the reaſon whereof is, that whilſt the corporeal Soul, ſwelling through the Opinion and Pride of its own excellency, raiſes and endeavours to expand it ſelf every way as far as may be beyond the limits of the Body, the animal Spirits tumultuarily call'd into the Brain, are not able to be contain'd within their wonted Tracts, but being there refracted, and diverſly reflected by reaſon of their too great exertion, are forc'd into new and wholly devious Tracts; wherefore, both themſelves being diſturbed from the courſe of their proper Emanation, and the nervous Liquour, ſoon acquire a ſharp and irritating diſpoſition, and conſequently a madneſs enſues.

So far of Madneſs raiſed by reaſon of a ſolemn evident cauſe alone: but this diſeaſe alſo ariſes often by reaſon of a Procatarxis præexiſting in the Brain, and chiefly by reaſon of a preceding Melancholy or Phrenſy: in that the animal Spirits being exalted a little too much with the nervous Juice, and in this being a little too much depreſs'd, acquire the Diſpoſition to madneſs.

2. The Diſpoſition to madneſs no leſs frequently has its roots in the maſs of Blood, and at length is produc'd into act, to wit, when the Blood being mightily depraved, and nitroſulphureous, either perverts

the nervous Liquour together with the animal Spirits, or furniſhes ſuch as are evil, which kind of taint of the Blood is either hereditary or acquir'd.

Firſt, its a common obſervation, that men born of Parents that are ſometimes wont to be mad, will be obnoxious to the ſame diſeaſe: and tho often they have lived prudently and ſoberly above thirty or forty years, yet afterward without any occaſion or evident cauſe will fall mad. The reaſon whereof is, that the Blood at that time being fallen from its due craſis by degrees to be nitroſulphureous, furniſhes the Brain with animal Spirits, and a nervous Juice of a moſt ſharp Nature. We have formerly ſhewn that the Elementary Particles in our Body perſiſt during Life, ſeparately from thoſe that are ſecondary, ſupplyed by Nutrition, and that they have times of their Crudity, Maturity, and Decay: wherefore we judge alſo, that the morbid *Seminia* come to a ripeneſs alſo according to the periods of ages. Moreover, we obſerve, that often theſe morbid Fruits being ripend, continue a good while, or during Life, and that ſometimes they wither away again as it were of their own accord, and then that afterward, after ſome tract of time, new Fruits ſpring forth again from the miaſm left behind, and riſes by degrees to their height; wherefore an hereditary Madneſs ſometimes is continual, ſometimes intermittent, and its Fits ſometimes are wont to return after ſhorter intervals, ſometimes after longer.

2. As the Procatarxis of the Mania, ſticking in the Blood, is often innate or originally in it, ſo the ſame ſometimes is engendred by degrees, either by an ill form of dyet, or by a ſuppreſſion of ſolemn Evacuations, by reaſon of a precedent Feaver, or for other cauſes, and at length being brought to a maturity, breaks forth into a madneſs. It's uſual in a great dearth for certain poor People who are forc'd to live only on diſagreeing Food, or ſuch as is of an ill digeſtion, at firſt to become ſad, with a ſtaring and wan aſpect, and in a ſhort time after to turn mad: the Flux of the Hemorrhoids or Menſes being reſtrained, or malignant Ulcers ſuppreſt, diſpoſe towards this Diſeaſe. Moreover, thoſe who originally or acquiredly are of an eager Temperament, an extravagant Behaviour, and an earneſt Countenance, becauſe of being nigh to a nitroſulphureous Diſpoſition of the Blood, are in danger of falling mad upon ſome ſtrong evident cauſe.

3. Venemous Ferments inſinuated into the Blood and nervous Juice, as eſpecially from the biting of Animals that are mad, or by the taking of ſome venemous things, are wont to cauſe Madneſs. Concerning the reaſon of the former, we have elſewhere propoſed our Conjectures. Of late a noble Lady, and worthy of Credit, related to me of her own Knowledge, that a certain Gentleman after having eaten at Dinner the tender Leaves of *Wolf-bane* in a Sallet with other Herbs, found himſelf ill in the Evening, and complaining of a great agitation and reſtleſſneſs of his Blood and Spirits, entreated his Friends that a Chirurgeon

geon might be called to open a Vein, and ſaid that otherwiſe he ſhould preſently run mad: which indeed happned as he ſaid, for, before he could be let blood, falling mad, he dyed within the ſpace of twenty four hours; which deadly affect hapned ſo on a ſudden, in as much as the Poyſon did not only pervert both the Blood and animal Spirits as to their Craſis, but by its malign Ferment preſently ſubverted them utterly.

The reaſon why mad Perſons are bold and very confident, ſo that they flye no dangers, and ſet upon the moſt difficult of things, is, that the animal Spirits being very exorbitant, and vehemently moved, both fortifie the Imagination, that no Object ſeems greater or more terrible to it than uſual, and actuate the Præcordia with Vigour, ſo that they ſtrongly and ſwiftly convey the Blood, and briskly drive it into the outmoſt bounds of the Body. In this affect the Soul ſtrives to outgoe, and to ſpring it ſelf as it were beyond the circumference of the Body, and ſo making an effort every way, it bears it ſelf undaunted againſt any incurſions of exteriour things.

2. The Reaſon why mad Perſons are ſtrong to a miracle, is, that Particles as it were nitroſulphureous, or otherwiſe very ſharp, or as it were Stygian, are contained in their Blood and nervous Juice, whence the animal Spirits excell in a ſtupendous and incredible elaſtick, or exploſive force, far above the natural.

3. It is to be obſerved, that mad Perſons are hardly ever wearied, for tho by raging and ſtriving they ſtrongly exerciſe their Limbs for many dayes and Nights, and in the mean while live without eating and ſleeping, they ſcarce at all faulter, nor deſiſt from their ſtrugling through a failure of Strength; which doubtleſs ſo happens, for as much as the animal Spirits, tho very movable and elaſtick, yet are not volatile and eaſily diſſipable, but by reaſon of the ſaline Particles depreſs'd from their volatility into a flowing ſtate, and being combin'd with the ſulphureous ones, become firm and fixt, and therefore hold out very long in their Activity.

4. Almoſt for the ſame reaſon, many Perſons, how much ſoever they ſuffer or are afflicted, are not hurt: but endure Cold, Heat, Watchings, Faſtings, Stripes and Wounds, without any ſenſible dammage, becauſe the Spirits being ſtrong and fixt, do not faulter nor flye away. Moreover, the Blood having got a nitroſulphureous dyſcraſy, is incapable of any other change, wherefore, tho inſenſible tranſpiration be ſtopt, and other ſolemn evacuations are ſuppreſt, or ſupplyes of the nutritive Juice are deny'd, neither a Catarrh, nor Feaver, nor an Atrophia, or Cacochymia lightly enſue upon Madneſs, for in this affect, tho the Particles of the Blood are grown very turgid, yet by reaſon of the ſtore of Salt, they do not take to a feveriſh Flame.

As to the prognoſtick of Madneſs, ſince the affected are never obnoxious to a Fever, nor to other Diſeaſes beſides, nor are eaſily hurt by outward Accidents, it is not a mortal Diſeaſe of it ſelf: but is very

difficlt of Cure, becauſe a great alteration is to be made in the *Blood* and *Spirits*, and the Diſeaſed are refractory to any method of Cure, being Enemies both to the Phyſicians, and themſelves.

If the *Madneſs* be *inveterate* or *hereditary*, or be caus'd by the *bite* of a *mad Dog*, it admits of a perfect Cure with difficulty, or not at all; that which is rais'd through ſome occaſion, whether it be from an *evident cauſe alone*, or comes upon a *Fever*, alſo on which the *Itch*, *Small Pox*, *Hemorrhoids*, or *Varix*'s happen, is more eaſily Cured.

Thoſe that are obnoxious to this Diſeaſe at times, are very much in danger about the *Summer Solſtice*, or in the *Dog days*; alſo in great changes of the Air, as when long colds or heats are changed into oppoſite conſtitutions of the Heavens.

Since there are two kinds of *Madneſs*, to wit, a *continual* and *intermittent* one; the method of Curing alſo ought to be twofold.

1. The *Therapeutick method* to be uſed in a *continual Mania*, ſuggeſts to us the *three primary Indications* ſo vulgarly known: *viz.* the *firſt Curatory*, which, regarding the Diſeaſe it ſelf, endeavours to correct or appeaſe the *furies* and exorbitancies of the *Animal Spirits*: The *ſecond preſervatory*, which, levelling at the cauſes of the Diſeaſe, undertakes to remove or amend the ſharp and nitroſulphureous Dyſcraſies of the *Blood* and the *Nervous juice*, and the Stygian diſpoſition, as it were, of the *Spirits*. The *third Vital*, which directs ſuch a way of Dyet and reſumptive nouriſhment, that both the nutritive and vital functions may be able to be carried on and maintain'd as is barely neceſſary in this Diſeaſe.

The *firſt Indication*, *viz. Curatory*, requires Diſcipline, *viz.* threats, bindings, or ſtripes, as well as *Phyſick*; and therefore the mad Perſon, being put into a Houſe fit for that purpoſe, let him be ſo managed both by the Phyſician, and prudent attendants, that he be kept in a manner always in his due behaviour, and in meet geſtures and motions, either by advice, chiding, or by puniſhments now and then inflicted on him; and indeed there is nothing more efficacious or neceſſary for curing mad Perſons, than that they always dread and ſtand in awe of certain Tortures, as it were; for by this means the Corporeal Soul, being ſomewhat depreſt and reſtrained, is forced to remit of its haughtineſs and exorbitancy; and therefore afterward grows mild by degrees, and is reduced to order. Wherefore mad men are ſometimes ſooner and more certainly cured by puniſhments and tortures, in a pent up room, than by Phyſick, or Medicines.

But withal, ſuch a *courſe of Phyſick* alſo ought to be us'd, which may reſtrain and bring down the haughtineſs of the *Corporeal Soul*: Wherefore in this Diſeaſe *Bloodings*, *Vomitories* and *Cathartick*s, how ſtrong

ſtrong ſoever they are, and given at rovers and boldly, very often do good. Which indeed manifeſtly appears, becauſe *Empyricks*, only with this kind of Phyſick, together with governance, and a ſevere diſcipline, often ſucceſsfully cure *Mad-men*. Tho this rough way of handling, does not ſo well agree with all *mad perſons*, but chiefly with ſuch as are raving mad, others being more remiſsly mad, are often cured by fair uſage and gentle Medicines.

But in moſt *mad perſons*, it is both the common voice and general practice to *bleed plentifully* about the beginning of the Diſeaſe; and indeed it will be good now and then to repeat it as far as the ſtrength will bear, and ſometimes to perform the operation in the *Arm*, ſometimes in the *Jugular Vein*, *Forehead*, or *Foot*; and ſometimes to open the *Hemorrhoid Veſſels* by Leeches: For theſe evacuations being ſeaſonably made, both the exorbitancies of the *Spirits*, and the haughtineſs of the *Soul* are excellently ſuppreſt; and likewiſe the *Dyſcraſies* of the *Blood* are corrected, in regard that a new and more mild ſprings up in the place of that which was taken away, being ſharp and corroſive.

That *Vomits* alſo do great good in curing *mad perſons*, it is paſt even into a Proverb, ſo that all *Hellebore*, nay, all *Anticyra* is aſſign'd to them: After what manner *Emeticks* often do good in Cephalick Diſeaſes, we have ſhewn before: *Quacks* in this caſe giving a large doſe of *Stibium*, tho it be raſhly and dangerouſly, yet have often ſucceſs. In truth, *Chymical things* beſt agree here, both becauſe they move more powerfully, and becauſe the Diſeaſed may be deceived more eaſily by them.

Take ſulphur of Antimony from eight grains to ten, Cream of Tartar half a ſcruple, mix them, by grinding them together, make a Powder, let it be given in a ſpoonful of Panada, or if it muſt be given craftily, and the Perſon not knowing of it, let it be put in a cruſt of white Bread, to be taken in Broath or Milk: let this vomitory be frequently repeated, viz. *once within four dayes.*

Take Mercurius Vitæ ſix or ſeven grains, make a Powder, let it be given after the ſame manner. The Emetick Tartar of Mynſicht, Hercules, Bovii, and other various preparations of Mercury, may be given after the ſame manner. Aurum Vitæ, or the Solar, and alſo the Lunar precipitate are accounted by Chymiſts *ſpecifick Remedies againſt Madneſs*, and indeed *Mercurial Medicines*, in as much as they work by *Vomit*, *and Seige*, and often alſo by *Sweat*, *Urine*, *or Salivation*, prove egregiouſly beneficial: a *copious Spitting*, and of long continuance has perfectly cur'd ſome mad perſons.

Strong Purges (where the ſtrength and conſtitution will bear them) in as much as they depreſs the exorbitances of the Blood and Spirits, and much evacuate the emunctories for receiving the recrements of the Blood and Nervous juice, often give relief alſo in this Diſeaſe.

For

For this use, preparations of *black Hellebore*, as especially its *extract*, and the *Wine of the infusion of its Fibres*, or *the pap of an Apple boyled with the Roots of it sticking in it*, are very much commended.

Take extract of black Hellebore, Calamelanos, of each a scruple; make a Bolus.

Take Calamelanos a scruple, Diagridium from twelve grains to fifteen, make a Powder.

Take Confectio Hamec, or the Electuary of the Juice of Roses from half an ounce to six drams, let it be given in Broth.

Take Gereons Decoction of Senna, or the Decoction of Epithymum (with two drams of the roots of Black Hellebore) six ounces, make a draught.

Take Pulvis Diasennæ two drams, let it be taken in Whey.

In the mean while that these things are done, let the preservatory Indication take care of the Cause of the Disease. Wherefore with these frequent Purges and Bloodings let altering Remedies be interlac'd, for tempering the Blood and nervous Juice, and for reducing them to their due Crases; if haply the diseased, being obsequious and tractable, do not refuse to take such things methodically.

Take crystal Mineral, or Nitre excellently purified two ounces, Pearl powdred two drams, Sugar-Candy two drams and a half, Camphire half a Scruple, let them all be ground into a subtle Powder; let two drams of this be put in a Glass-bottle holding a quart, with Fountain-water, or small or mild Beer for ordinary Drink, wich may be given at pleasure.

Let boyling Whey be poured to the Flowers of Violets or Nymphea, after an infusion for two hours let it be drank off plentifully: Spaw-waters also drank regularly and in a plentiful manner, are proper for mad Persons.

Take fresh and tender tops of Borrage and Bugloss of each four handfuls, three mash'd Apples, Sal Prunella two drams, Sugar half an ounce, being bruised together, pour to them three pounds of Fountain-water, express it strongly, let half a pound be taken thrice a day or oftner.

Take Conserve of the Flowers of Borrage and Violets of each three drams, Confection of Hyacinth, Alchermes of each two drams, Coral prepared a dram and a half, Pearl powdred a dram, Salt of Coral a dram, Syrup of red Poppyes what suffices, make an Electuary, wherefore let two drams be taken twice or thrice a day drinking after it of the following Liquour four ounces.

Take Water of Nymphea, Borrage, Bugloss, black Cherryes, of each four ounces, of red Poppyes six ounces, red Rose-water two ounces, Camphire tyed in a Nodulus and hung in a Glass half a dram, Syrup of Coral an ounce and a half, mix them, make a Julep.

Take the yellow Flowers of a Willow what suffises, distill them with common Organs, repeat the distillation, pouring the Water on fresh Flowers by three Cohobations, let it be given to four ounces twice or thrice a day, sweetning it with Syrup of Nymphea.

Take

Take leaves of the Willow, Meadow-ſweet, Burnet, Borrage, Baum, of each ſix handfuls, Flowers of Nymphæa, tops of St. Johns *Wort of each four handfuls, Camphire powdred three drams, all being ſlic'd together pour to them of freſh Milk eight pounds, diſtill it with common Organs.*

Let Sheeps Brains be diſtilled with milk, and let the Water be given to three or four ounces, thrice a day.

Moreover, let ſpecifick Remedies be applyed to uſe, of which kind *the Decoction of Pimpernell with a purple Flower is famous, alſo the tops of St.* Johns *Wort, and other Decoctions, Opiats, and powders againſt Madneſs,* well known by all famous Empiricks.

As to the cure of Madneſs cauſed by the biting of venemous or mad Animals, ſince it is in a manner only Empirial, and vulgarly known, there is no need for us to diſcourſe of it in this place, we having alſo propos'd our Conjectures concerning it elſewhere: Again, the *Decoction or infuſion of Apples either crude or boyled in fountain Water, the Liquour Tea, Emulſions,* with many other things, forms of which we have given in the cure of Melancholy, are proper in this caſe.

Moreover, many other helps beſides *Blooding* are wont to be afforded from *Chirurgery* for curing this Diſeaſe: *Cupping-glaſſes,* with a *Scarification* often do good; *Veſicatories, Cauteries,* both actual and potential, are commended by many. Some commend *Arteriotomy,* others *trepanning,* and others *Salivation*: But theſe kinds of *adminiſtrations,* beſides that they are of a doubtful effect, cannot eaſily, and ſcarce with ſafety, come in practice, by reaſon of the intractable diſpoſition of the Diſeaſed. Wherefore it would be ſuperfluous here to enquire into the reaſons of the relief or Cure to be expected from thoſe things. It is good ſometimes, the Head being ſhav'd, to apply the warm Lungs of a *Lamb* or *Sheep,* and other *fomentations* to the *Sinciput,* and now and then to change them. But theſe *Epithemes* alſo, in regard they cannot be methodically applied and repeated to the Diſeaſed, who admit them with reluctancy, often do more hurt than good.

30. The *Vital Indication* directs how *mad perſons* ought to be handled, as to their *Government, Diet* and *Sleep.* In this Diſeaſe, otherwiſe than in many others, there is no need of *reſtoring*: for neither ought the *ſtrength* to be reſtor'd with *Reſumptives,* nor the *Spirits* with *Cordials*; but on the contrary, a ſuppreſſion, or as it were, a certain extinction is to be us'd to both, being too exorbitant of themſelves, reſembling a flame, as it were, burning above meaſure: Therefore let the *Dyet* be thin and not delicate, the cloathing courſe, the lodging hard, the dealing with them ſevere and rigid. But *Sleep,* becauſe it is very neceſſary, if it be wholly wanting, ought ſometimes to be caus'd by giving *Remedies*; for which end, the *Hypnotick Medicines* preſcribed before for Melancholy, are proper alſo in this diſeaſe, thoſe who have an inveterate habitual Madneſs are ſeldom put to a

Phyſicla

Phyſical cure, but being committed to Hoſpitals for mad Perſons, by the ordinary diſcipline of that Place, either return at length to themſelves, or are kept there from doing hurt to themſelves or others.

It is not needful to illuſtrate the nature of this Diſeaſe with Hiſtories and Examples, and to ſet forth many Types of it; but rather addreſs your ſelves to the Hoſpitals of mad People, where, not without a great admiration, you may behold as it were a new and monſtrous Generation of Men, viz. contrary to ſuch as are rational, and as it were our Antipodes; who, if they could all be gathered together into one place, and all the Fools and ſenſeleſs Perſons be joyned with them, I know not whether they would not make an equal diviſion of the whole Earth with the ſober and prudent.

So far of the cure of a continual Madneſs. But the intermittent has perfectly lucid intervals, in which the diſeaſed return to a ſound Mind, or the Fury only ceaſes, the Delirium ſtill remaining, ſo that the affected become gentle and tractable: yet continuing ſtill to err as to their Imagination and Judgment, they ſpeak and do a great many abſurd or incongruous things, and afterward become mad again at times.

The remedy of both theſe affects, as to the curatory Indication, is the ſame as in a continual Madneſs, that it will not be needful to ſet down here any other Method or Medicines: but as to what regards the Prophylaxis, or preſervatory Indication, to wit, whereby the way of curing to be uſed out of the Fits for preventing or leſſening them is order'd, in which the Fury only intermits, the Delirium remaining, the very ſame phyſical Method and Remedies, which we have preſcribed for removing the Procatarxis of Melancholy are proper.

In a madneſs which intermits perfectly, as to all ſymptoms; at the moſt fit ſeaſons, to wit, Spring and Fall, ſolemn courſes of Phyſick ought to be entred upon; and alſo there is always need of a care and governance of the Diſeaſed; both that as to his diet, and way of Life, he be kept always in an even and moderate Temper; and that as ſoon as the ſigns of an imminent Fit appear, blooding and purging being preſently uſed, its acceſs be kept off.

Therefore, at the approach of the Equinoxes, let Blood be drawn from the Arm, and then after ſeven, or eight dayes from the Hemorrhoid Veins by Leeches: Let Purges and Vomits by due intervals be given twice or thrice: moreover on intermitting dayes, let altering Remedies be orderly taken at phyſical Hours: forms of theſe are deliver'd both in this Chapter and in the foregoing for the cure of Melancholy: let the diet be thin and of good digeſtion; as to Sleep, Motion, and other non-natural things, let all be moderate: If at any time a Perſon ſeems to be threatned with an acceſs of Madneſs, conſtantly before the Summer ſolſtice, let blooding with vomiting, and a thin diet be uſed.

CHAP.

CHAP. IX.

Inſtructions and Preſcripts for the cure of Stupidity or Folly.

STupidity or Folly, tho it chiefly belongs to the rational Soul, and ſignifies the defect of the Underſtanding and Judgment, nevertheleſs it is not improperly placed among the Diſeaſes of the Head, or of the Brain; to wit, in as much as that Eclips of the ſuperiour Soul proceeds from the Imagination and Memory injured; and the failings of thoſe depend on the faults of the animal Spirits and of the Brain it ſelf.

1. As to the Animal Spirits, how they ought to be qualified of their proper and genuine Nature, and what they are by reaſon of a preternatural diſpoſition in the Frenſy, Melancholy, and Madneſs, we have ſufficiently declared; but beſides, ſometimes the animal Spirits being in a manner deſtitute of active Particles become as it were dead and effæte, to wit, whereas the ſpirituous Particles ought to predominate and gather to them the ſaline volatiz'd; in a Stupidity as well both theſe as the ſulphureous, being too much depreſs'd, are almoſt drown'd and overwhelm'd in ſuch as are watery and earthy.

2. As to the fault of the Brain, firſt, its a vulgar Obſervation that the Wit and towardly Diſpoſition depends ſomewhat on the greatneſs and figure of the Head, and conſequently of its Brain, for as to its bulk, it is a Proverb, that *too little or too much Brain argues Folly*: And tho this does not always happen ſo, yet it does frequently, the reaſon of which is, that in a little Brain only a few Spirits are engendred and exerciſed: and a great Brain, conſiſting for the moſt part of a courſe texture, is not fit for any acuteneſs of Wit.

Secondly, the genuine and beſt figure of the Brain ought to be globous, to wit, for this end, that the Spirits may be diffus'd with an even efflux from the midſt of it on every ſide to its circumference, and may be thence retorted every where with equal Angles of Reflexions, but thoſe who have a flat Head, or too copped, or otherwiſe diſproportionate, for the moſt part have ſome notable failing in the animal Faculty.

3. The Subſtance of the Brain ought to be well tempered and of a laudable texture, nor only as to the qualities of Heat and cold, drought and moiſture; but its Conſtitution ſhould be ſubtle and aereal, conſiſting of a plenty of volatile Salt and Spirit, with a moderate proportion of the other things, that the Spirits may readily paſs the whole,

and frame Tracts for themſelves; and withall it ſhould be indifferently firm and compact, that the Tracts and Paſſages may remain when made, nor preſently be defac'd by the ſubſiding of Parts too tender. But in Perſons that are ſtupid we may imagine, ſometimes an exceſs of ſome manifeſt quality in the Brain, as cheifly of moiſture and cold, for which reaſon Children and aged Perſons are often wont to be affected with a Dulneſs of the Senſes; ſometimes a Texture too groſs and earthy, ſo that the Spirits cannot eaſily irradiate it, or make Tracts for themſelves. To this groſs Texture of the Brain ſome, born of Ruſticks, are frequently obnoxious, ſo that in ſome Families, looking back upon many Generations, you will ſcarce find one wiſe or witty Man.

4. Sometimes the evil conformation of the Brain as to its Pores and Paſſages, acquired by reaſon of ſome Diſorders, is the cauſe that the animal Function is not duely performed: for ſometimes theſe Pores are either wanting, or perverted, that the animal Spirits cannot duely operate.

So far of the conjunct Cauſes of Folly, as to the procatarctick and evident Cauſes, there are many Occaſions by reaſon of which the foreſaid blemiſhes are brought on the Brain, or Spirits, or both of them.

For firſt, Stupidity is ſometimes originary, or born with a man; and ſo either it is hereditary, as when Fools beget Fools, the ſame effæte Particles concurring to frame the Animal Organs in the Son which were in the Father; or the Connate Stupidity is accidental, as it were, to wit, it frequently happens that wiſe and mighty ingenious men beget meer Sots, which ſometimes ſo falls out for theſe reaſons, either that the Parents ſpend their Spirits in Study and too much thinking, or weaken and enervate the Body through intemperance, luxury, and ill living: Whereas we ſee in other Animals, as in a good *breed of Horſes* and *Cocks*, that their young ones do certainly *patrizare*, ſo that preſently they are ſold at a great rate, their Vertues, in regard they are not broken by a diſorderly and preternatural way of living, deſcending in a long ſeries to their poſterity.

Secondly, there are many evident cauſes, by which Stupidity is brought on ſuch as are originally ſound: Some at firſt being witty and ingenious, in their declining years grow dull and doltiſh; on the contrary, ſome at firſt being dull and incapable of Learning, as they grow further in years, become very witty.

Thirdly, ſometimes a great wound, or concuſſion of the Head, eſpecially which happens by falling headlong from an high place, brings a prejudice and weakneſs to the animal faculty, dulling the underſtanding.

Fourthly, frequent drunkenneſs and ſurfeiting, eſpecially if men ſleep preſently on eating and drinking, very much weaken the underſtandings of ſome, and impair the uſe of Reaſon; as a frequent uſe of *opiats* has ſhrewdly blunted the edge of the underſtanding of others.

Fifthly,

Fifthly, violent and ſudden Paſſions, ſuch chiefly as an exceeding great terrour coming unawares, or an extream ſadneſs, have rendred ſome doltiſh.

Sixthly, We may obſerve, that ſome Men by reaſon of great Diſeaſes of the Brain have turn'd Fools: this frequently happens in a ſevere and long continued Epilepſie; in as much as this affect poſſeſſing the *Meditullia* of the Brain, perverts, and ſo ſtuffs with Feculencies, and fills all the Pores and Paſſages by reaſon of the Spirits there frequently and vehemently exploded, that the Tracts of the Spirits being cloſe ſhut, the Acts of the inward Senſes and Motions are hindred: Moreover, I have obſerved Stupidity to accompany and precede the Palſey in many, to wit, the ſame matter which in the *Corpus Striatum* brings a Reſolution, being gathered together in the *Corpus Calloſum*, if it does not bring an Apoplexy or Carus, often cauſes Folly.

There are many differences of this Diſeaſe, and firſt, we uſe to deſtinguiſh betwixt Folly and Stupidity; that thoſe who are affected with the former, apprehend ſimple things well and quick enough, and keep them faſt in Memory, but for want of Judgment, ill compound, or divie Notions, and far worſe inferr one thing from another: Moreover, by fooling, and doing, and ſpeaking a great many things unhappily or ridiculouſly, they move Laughter in the Standers by: on the contrary, thoſe that are ſtupid by reaſon of the defects of the Imagination, Memory, and Judgment, neither apprehend well, nor nimbly, nor argue well: moreover, they do not behave themſelves as the former, in making Sports and Geſtures, but blockiſhly and unfeatly, and as it were, like Apes, and conſequently the ſimplicity of theſe is more, who ſo carry their Diſeaſe in their Countenance and Geſture. In Folly, it ſeems that the animal Spirits being ſomewhat nimble, but unſtedfaſt, and having only ſhort and oblique Tracts, do not paſs the Brain with an even and conſtant irradiation, but making excurſions this way and that after a deſultory manner, exerciſe only ſlight or ridiculous Acts of animal Functions: but in Stupidity, the Spirits of their own nature being dull and obtuſe, and reſiding in a groſs and unpervious Brain, are not able to exert themſelves for duly performing the Offices of the animal œconomy.

There are many degrees of Stupidity, for ſome Perſons are accounted unfit as to the comprehenſion of all things, others only as to ſome: ſome being wholly unfit for Learning, and the liberal Sciences, are apt enough to mechanical Arts: others, tho incapable of both theſe, yet readily comprehend Agriculture, and Country Affairs: others, being incapable in a manner of all buſineſs, can be taught only thoſe things that regard eating and drinking, and the common way of living, others being meer Dolts, ſcarce underſtand any thing at all, or do any thing with Knowledge.

As to the Prognoſtick, Stupidity contracted by birth, or hereditary, or hapning through ſome unknown cauſes, if it continues to the time of Puberty, is ſcarce ever cured: tho ſometimes it happens that little Children, at firſt dull, and almoſt ſenſeleſs, when the Craſis of the Brain and Spirits come afterward to a maturation, become ingenious, and apt enough to learn.

The Diſeaſe raiſed through ſome ſole evident Cauſe, as by a hurt of the Head, or a violent Paſſion, alſo hapning upon an inveterate Epilepſy, if it perſevers ſome time, is afterward incurable.

That, which enſuing upon other ſleepy Affects, depends chiefly on the hurt of the Memory, ſometimes thoſe affects being cured, vaniſhes of its own accord: if at any time therefore in theſe Caſes the cure of Stupidity is ordered, in a manner the ſame method of healing and Remedies which we have preſcribed for the preſervatory indication of the Lethargy will be proper here: whereof the chief intents muſt be, that the animal Spirits being free from any Deadneſs and Stupefaction, make Pores and Paſſages within the tranſlucid Brain, and duely expand themſelves in them.

Sometimes a Fever has cur'd ſome Fools and ſtupid Perſons, and has rendred them more acute, *Huartus* relates, that a certain Fool in the Court of *Corduba*, being affected with a malignant Fever, arriv'd in the height of the Diſeaſe to ſo great an acuteneſs of Judgment and Diſcretion, that he put the whole Court in Admiration, and for the whole remainder of his Life continued a very prudent Perſon: and we have known a certain Perſon of a dull, and indeed *Bœotian* Underſtanding, who raving in a Fever, was very quick at breaking ſmart Jeſts, and ſeaſon'd with much Salt: the Reaſon of which things ſeems to be, that the Febrile heat ſometimes rarefies and diſperſes the miſt inveſting the Brain.

Therefore, as to the cure of this Diſeaſe, Stupidity, whether innate, or acquir'd (if it be not a plain ſenſeleſneſs, and doltiſhneſs incapable of all Erudition) tho it be not uſually cur'd, yet it is wont to be amended. Wherefore the cares both of a Phyſician and Tutor muſt be us'd for poliſhing ſomewhat the Underſtanding of ſuch as are ſo affected, and that being brought to the uſe of at leaſt ſome little Reaſon, they may be exempted from the rank of Brutes.

For this end, becauſe *Bards*, or ſuch as are very blockiſh, learn not the Notions of things more readily than Children their A. B. C. therefore they are to be inſtructed in all things by an aſſiduous and very diligent Maſter, and the ſame things are to be incultated again and again; For by this means the Spirits, tho dull and torpid, will in ſome meaſure be actuated by perpetual Exerciſe; and being continually ſtirred up, will make at length for their Expanſion ſome Tracts or Paſſages, tho imperfect, in the Brain, how groſs ſoever. For the better and more eaſie effecting of theſe things, phyſical Remedies alſo ought to be given

ven for purifying and volatizing the Blood and nervous Liquour, together with the animal Spirits; and alſo for clarifying the Brain, and rendering it as it were diaphanous.

For purifying the Blood, let a gentle purge ſometimes, and letting blood in a ſmall quantity, if the ſtrength will bear it, frequently be uſed; for the ſame purpoſe, and likewiſe for deriving Fæculencies from the Brain, Iſſues are proper in the Arm, or in the Leg, or together in both: in groſs Bodies, and ſuch as have a moiſt Brain, it is good ſometimes to cut two by the Shoulder blades. Moreover, it is on this account that ſome mightily extoll trepanning, (to wit, whereby the Brain may tranſpire and evaporate the more freely) let the diet be light and attenuating, the Habitation in a free and dry Air; the Sleep moderate.

After that theſe things have been uſed for ſome time, and in a ſolemn manner, if there be found no change, it will be in vain to waſte any more phyſical Oyle and Labour; but if after the uſe of thoſe things, ſigns of benefit, or ſome hope appear, ſometimes it ſeems proper to add altering Remedies, to be taken daily at Phyſical hours for a long time: Forms of theſe may be taken from our curatory part of Phyſick before delivered for removing the Procatarxes of moſt Cephalick Diſeaſes: Moreover, I have thought good to add here beſides ſome Magiſtral Receipts which particularly regard this caſe.

Take Spirit of Armoniack ſuccinated ſix drams, give from fifteen drops to twenty in the Evening, and early in the Morning in three ſpoonfuls of the following diſtilled water, drinking after it ſeven ſpoonfuls of the ſame.

Take freſh leaves of Miſſletoe growing on Apple-trees ſix handfuls, Sage, Roſemary, Savory, Wild-time, Calamint, Penny-royal, Marjoram, the greater Rochet, of each four handfuls, roots of Angelica, Maſter-wort, of each ſix ounces, Zedoary, the leſſer Galingal, Calamus Aromaticus, Winters-bark of each two ounces; Cloves, Nutmegs, Mace, Cinnamon, Ginger of each an ounce; Cubebs, Cardamums, Grains of Paradiſe of each ſix drams; all being ſlic'd ſmall and bruiſed, pour to them of the beſt Canary wine twelve pounds, let them digeſt cold and in a cloſe Veſſel for three dayes, then diſtill them according to Art, let the whole Liquor be mixt, and ſweeten it with Sugar as you uſe it, the Doſe is two or three ounces.

After the uſe of *Spirit of Armoniack* for fifteen or twenty dayes, let other Medicines have their turns for about the ſame ſpace of time, ſuch as are the *Spirits of Soot, Harts-horn, mans skull, the tincture of Coral, Antimony, Caſtoreum, Amber, Quercitan's Elixir of Life, Elixir Proprietatis, Spirit of Lavender*, &c. Or,

Take Conſerve of the flowers of Lillies of the Valley ſix ounces, roots of Aromatick-reed preſerv'd ſix drams, Ginger condited in the Indies, Nutmegs condited of each half an ounce, Species Diambræ two drams, Lignum Aloes, yellow Saunders, roots of choice Zedoary, Cubebs, Jamaica Pepper of each a dram and half, Coral prepar'd two drams, Syrup of the

Pre-

Preserve of Ginger what ſuffices, make an Electuary; the Doſe is two drams morning and evening, drinking after it three ounces of the diſtill'd Water.

Let thoſe, whoſe Brains abound with too much moiſture, drink every morning a *draught of Coffee with the leaves of Sage firſt boyled in it*, to thoſe whoſe animal Spirits are effæte and depauperated, the *drink of Chocolate*, ſuch as before deſcrib'd, ſeems profitable. For ordinary drink prepare ſmall Ale, or Beer, and in a Veſſel of three or four Gallons let the following Bag be put after it has wrought. *Take leaves of Salvia acuta dried four handfuls, Cubebs an ounce, Cloves, Nutmegs, being ſlic'd and bruis'd, mix them according to art.*

Outward Applications have place here, of which kind are, a *Cucupha*, or Cap, Plaiſters, and Liniments, and ſometimes let theſe, ſometimes thoſe, or the others be us'd.

Take Flowers of Lillies of the Valley, Roſemary, and Stœchas of each a handful, Celtick ſpike two drams, Roots of Cyperus, the leſſer Galingal, Florentine Orris of each three drams, Labdanum, Benzoin, Balſam of Tolu, Amber of each two drams, Nutmegs, Cloves, Mace, Cinnamon, of each a dram and a half, make of all a ſubtle powder, and ſew it into a cap interlacing it with Cotton.

Take of the Plaiſter call'd Flos Unguentorum two ounces, Tachamahacha, Ceranna, Balſam of Tolu of each three drams, powder of Amber and Myrrhe of each two drams, Cloves, Nutmegs, Mace, of each a dram, being melted together, let them be made into a maſs, of which let a Plaiſter be made, to be ſpread on Leather, and to be apply'd to the Head ſhav'd.

Take Oyle of Palm half an ounce, oleum Capivii three drams, Balſam of Peru a dram, oyl of Nutmegs by expreſſion two drams, oyl of Amber half a dram, make a liniment for the Head.

I could add here many other Medicines and wayes of Adminiſtrations; but let theſe ſuffice in a Caſe almoſt deſperate, where moſt commonly no Remedies do good, and the Cure is never perfected.

CHAP. XIII.

Inſtructions and Preſcripts for curing the Gout.

AMong the Diſeaſes of the *Head* and *Genus nervoſum*, we juſtly rank alſo certain Affects which are wont chiefly to inſeſt the *Feet* and *Belly*, to wit, the *Gout* and *Colick*. For we may conclude from the primary ſymptom, viz. *Pain*, that the Seats of both are in the nervous Parts. I ſhall ſpeak in the firſt place of the former.

The

The *Gout* moſt commonly is wont to ariſe about the *Internodia* of the *Bones of the Feet*; tho often it happens in the *Joynts* of the *Hip*, *Knee*, *Elbow*, *Shoulder*, *Wriſt*, *Ancle*, and of other Parts.

The *Fits* of this *Affect* (which in a manner is always intermittent) either ſeize at *random*, or *periodically*; which ending ſometimes ſooner, ſometimes later, good lucid Intervals enſue; preſently, upon the firſt invaſion, Pains for the moſt part ariſe without any ſwelling; tho afterward, about the height of the Diſeaſe, the Part affected often ſwells; the Pains about the beginning ſcarce yield to any Remedies, but are wont to be very much exaſperated by Cathartick, and not preſently to be driven away, or aſſwag'd by Topicks; the Fits moſt commonly ſeize on a ſudden, and without a previous affect, tho ſometimes it has a fore-running efferveſcence in the Blood, or a little Fever. The Diſpoſition to this Diſeaſe ſometimes is Hereditary, ſometimes acquir'd through an ill Diet: the Occaſions or Cauſes, which being wont to actuate the Diſpoſition, raiſe the Arthritick Pains, are ſome violent alterations, or Paſſions inflicted on the Humours and Spirits. Hence Surfeiting, immoderate drinking, eſpecially of acid and thin Wines, Tranſpiration letted, Anger, immoderate Venery, Sadneſs, alſo the Revolutions and great changes of the Year and Air, every where bring Fits of this Diſeaſe: thoſe that are obnoxious to this, are alſo in danger of being ſometimes troubled with the *Stone* or *Gravel* in the *Kidneys*, and on the contrary: moreover, the Gout increaſing gathers together every where about its chief Seats, to wit, the Joynts, a calculous matter, and there raiſes a *tophous maſs*.

The Parts affected, upon the twitching of whoſe Fibres the Pains are raiſed, for the moſt part are the *Perioſtia*, or the Membranes covering the heads of the Bones, alſo the Tendons, and haply the Ligaments there plac'd: but ſince the Pain in thoſe Parts depends wholly on the ſolution of continuity, and this proceeds from a certain matter ſticking in, or lying on thoſe Bodies we muſt enquire, firſt, of what kind that morbifick matter is; ſecondly, whence it is brought thither, and thirdly, after what manner, by ſolving unity in them, it cauſes ſuch periodical Fits of the Gout.

As to the *morbifick matter*, it ſeems in the firſt place that it is neither the Blood nor the nervous Juyce by themſelves; nor alſo one ſingle Humour depos'd by either of them, but that in the chief Seat of this Diſeaſe many fermentative Juyces, and not eaſily miſcible, meet; and then that from their conteſt and efferveſcency painful twitchings of the nervous Fibres ariſe.

Therefore a ſaline or tartarous matter, depos'd from the arterious Blood about the ſpaces betwixt the Bowels, is as it were the ſeminine Seed of this Diſeaſe; which nevertheleſs, tho heap'd together in a great plenty, is wholly unfruitful of it ſelf, till the nervous Liquour growing turgid, ſends acetous Recrements, falling from it, to the ſeat of the

the former, which, as the maſculine Seed, preſently renders the other prolifick: for, in as much as thoſe two particles, which are of a differing ſtate and origine, meet, and mutually conteſt, they twitch the Fibres of the Membranes and Tendons, and ſo cauſe the Fit of the Gout, the appeaſing of which depends wholly on the mutual ſubduing and diſſipation of the ſharp Particles of both kinds.

As to the evident cauſes for which the nutritive liquor, brought from the Blood to the Joynts, is too much ſtored with a fixt Salt, and by reaſon of which theſe Parts become over-ready and eaſie to receive what is diſproportion'd to them, in regard they are various and manifold, we ſhall here briefly touch the chief of them.

1. And firſt, an hereditary diſpoſition is wont to produce both the failures: for Gouty Perſons for the moſt part engender Gouty Children; and this Diſeaſe, deſcending from Parents to Children, is wont to have in both not only the like fruit, and to be brought to a ripeneſs about the ſame terms of age; but for the moſt part it fixes its firſt roots in the ſame members, and every where obſerves the like progreſs.

2. But nevertheleſs, the *Arthritical diſpoſition*, without an original taint, is often cauſed by reaſon of an ill dyet, and errours in the ſix nonnatural things; for thoſe who being given to feaſting and good fellowſhip, delight themſelves in eating and drinking much and diſorderly, and eſpecially if they feed on ſalt and ſumptuous proviſions, and drink Wine plentifully, eaſily contract this Diſeaſe. For by this means none but an indigeſted *Chyle*, and ſuch as is endowed with wild and unmeet Particles is prepared in the *Viſcera*; moreover, after much drinking of Wine, Salt dregs and heterogeneous filth, which otherwiſe would ſtay in the firſt paſſages, being too much exalted, are conveyed into the Blood: To which irregularities in Dyet, if a ſedentary Life, Idleneſs, and much ſleeping are joyned, ſo that neither the ſuperfluities exhale, nor the ſaline Impurities are blown off by exerciſe that they do not ſubſide about the Joints; certainly a great ſtore of this *Alchaliſate ſeed* will be ſown for producing this *Diſeaſe of the Joynts*.

The weakneſs and Arthritick diſpoſition of the Joints is not only hereditary, but is frequently cauſed on ſeveral occaſions; the falling down of the morbifick matter often brings it: for if by chance it happens that the firſt fit of the Gout be in this or that Part, the peccant humour will afterward more readily fall on that member; and in a ſhort time will make there, as it were, its neſt, where it will continually lodge its brood: Moreover, ſolution of Continuity alſo, or an injury hapning to ſome Joint by cold or moiſture, a wound or luxation often cauſe a Gouty diſpoſition.

The evident Cauſes, which in reſpect of the Nervous Liquor, cauſe Fits of the Gout, either pervert the particles and Portions into

into an acetous nature, or being before degenerated, ſtir them to fluxions.

1. Many acid Liquors and ſmall Wines ought to be avoided, and experience teaches us that Cyder and ſtale Beer ought of all things to be ſhunn'd by Arthritical perſons, for thoſe kinds of drinks do not only bring into act the latent cauſe of the Diſeaſe, but by filling the Brain and Nerves with a great many acetous particles, they contribute to its fuel, and encreaſe the morbifick matter.

2. Immoderate or unſeaſonable exerciſe of the Body, Violent paſſions, immoderate Venery, and a diſorderly Diet, and likewiſe whatſoever things greatly trouble or exagitate the Spirits and Humours, and conſequently raiſe fluxions of the nervous Juice, or of its Recrements cauſe Arthritick pains.

3. *Solemn Evacuations ſuppreſt*, alſo an admittance of cold and moiſture, foraſmuch as by this means the Blood, and conſequently the Nervous Liquor fall into effervеſcencies and fluxions, bring fits of that Diſeaſe.

4. For the ſame reaſon changes of the places of aboad, alſo the revolutions of the year are wont to bring pains of the Gout, that it is become a Proverb, that *Gouty perſons carry their Almanack in their Bones*, and from their pains draw moſt certain prognoſticks of the ſeaſons; for as often as a moiſt conſtitution of the year, and South or North Winds, or Snows are at hand, they are wont to predict thoſe things from the acceſſes of their pains. Moreover, at each quarter of the year, eſpecially Spring and Fall, they are more ſorely tormented; wherefore the Æquinoxes are always religiouſly obſerv'd by them: The reaſon of theſe things partly conſiſts in this, that inſenſible tranſpiration is variouſly altered by reaſon of the changes of the air and of the year; for which reaſon, the *Effluvia*, which were wont to tranſpire, being reſtrain'd, ferment the Blood and Nervous humour, and eaſily ſtir them to Arthritick fluxions. Moreover, the humours of our Bodies, as the Juices of Vegetables, and other natural or artificial liquors, diverſly ferment according to the changes of the ſeaſons, and fall into various ſtates, ſometimes of fixation, ſometimes of volatility, ſometimes of flowing.

The chief differences of this Diſeaſe are taken from the places affected, and therefore they are made, as it were, the diſtinct ſpecies of the ſame, *viz.* to wit, the Hand Gout, the Hip Gout, the Knee Gout, the Foot Gout: Mean while, pains uſually rais'd in any other Members, go by the common name of the Gout: Whether the Tooth-ach, the pain in the Loins, and pains of other Parts ought to be referr'd to this, I have not now leiſure to enquire.

A long continued Gout very often joyns to it a Scurvy, and ſome Scorbutick affects ſo plainly counterfeit the Gout, that they cannot eaſily be diſtinguiſh'd: The reaſon of the former is both a like *Dyſcra-*

ſy of the Blood, in both affects depending on the fixt Salt; and likewiſe that the Scorbutical diſpoſition eaſily comes upon Gouty perſons; for that keeping long to their Bed or a Chair, they uſe no exerciſe. Secondly, the Scorbutick affects which imitate the Gout, are a Rheumatiſm, and the *Arthritis vaga Scorbutica*, concerning which we have written in our Tract of the Scurvy.

The Gout has ſo near a Relation to the Stone in the Reyns, that both affects, as tho they were of the ſame Origine, moſt commonly concur: for ſcarce any Perſon is troubled with that Diſeaſe, but he is found obnoxious to this; Moreover an inveterate Gout is wont to cauſe ſtrong concretions in the Joints, ſuch as the Nephritick Diſeaſe in the Reins: hence I think it very likely that the ach in the Reins ariſes from a like, or wholly the ſame cauſe which we have aſſign'd for the Gout; to wit, that the *Salino-fixt-matter* depos'd by the Blood in the Reins ferments with the acid humour often ſent thither by the Nervous Ductus's; and that therefore Nephritick Pains are frequently cauſed; and that afterward the Stone is form'd by both matters coagulated after fermenting.

As to the Prognoſtick of the Gout, every man knows it to be a Diſeaſe that is ſafe enough, but extreamly difficult to be cured. 1. As to the former, this Diſeaſe is not only void of danger as to it ſelf, but is a prevention againſt moſt other Diſeaſes: for gouty Perſons by reaſon of a ſaline-fixt Diſcraſy of the Blood are not obnoxious to Fevers; Moreover they live for the moſt part free from other affects of the Head or Viſcera, in as much as the Recrements both of the Blood and Nervous Juice are continually depos'd in the Joynts. 2. But as to the way of its cure, it is ſo difficult, that for the removal of the Procatarxis of the Diſeaſe there is requir'd both a moſt perfect amendment of the two Humours, viz. of the Blood and Nervous Juice, to wit, that they engender not any Saline-fixt, or acid Particles, and likewiſe a Reſtitution of the weakned Joints (neither of which can ever eaſily be done) to which may be added, that the conjunct cauſe of this Diſeaſe lies in parts very remote, where the Vertues of no Medicine reach.

Sometimes it happens by reaſon of the fluxions of the Arthritick matter being ſuppreſt or ſtruck back, that one while gripes of the Belly or Viſcera of the Abdomen, another while a Dyſpnæa, Aſthma, or other affects of the Breſt, and ſometimes alſo that the Apoplexy, and other ſleepy or convulſive Diſeaſes are raiſed; from which things being obſerved, it will be obvious to object, that the *Minera* of the Gout is not ſuch as we even now deſcribed it, becauſe its ſaline part, in regard it is the ſame which is appointed for the nouriſhment of the Joints, cannot be driven thence, or convey'd, or depos'd elſewhere: then as to the other part, to wit, the *acid Seminium* depoſed in its uſual place, it ſeems that that cannot eaſily be driven back, and being ſuppreſt by it ſelf, or in its Paſſage, or convey'd elſewhere, that it will not much hurt any part; but it may

eaſily

eaſily be replyed to this, that the acetous Portion of the Arthritick matter flowing in the Ductus's of the Nerves may be repelled or ſtopt, and that being diſcharged on other parts, it often cauſes very ſore Diſeaſes, and indeed the nervous Liquour and its Reçrements, ſince they conſiſt of Particles that are very ſubtle and active, upon any ſmall let or repulſe are driven into divers ſorts of ſallies and fluxions; Moreover, when thoſe grow turgid about the noble parts, or within the Ductus's of the Nerves, or meet with Particles of other Humours of another kind, and ferment with them, they cauſe various affects either inducing pain, or convulſive: and often, in as much as Particles of a differing nature are coagulated together, Tumours, ſometimes St umous, ſometimes Cancrous, or otherwiſe malignant ariſe.

Whilſt I was writing theſe things, I was called to a renowned Matron, who formerly having been very obnoxious to the Gout, after that ſhe had been ill of late for about three Months of a very great weakneſs of the Stomack with an *Anorexia*, a Nauſeouſneſs, and almoſt a continual Vomiting, at length I know not on what occaſion, falling into frequent Swoonings, a little after ſhe was often troubled with a Vertigo, with a failing of Memory, and ſometimes with a ſlight Delirium, and when ſhe had continued ſo for many dayes, and in the mean while being free from the Gout, and having a good Stomack, ſhe eat Broath twice or thrice, and fleſh once a day with an Appetite, and diſgeſted it without trouble; this was a plain ſign that the Recrements of the Nervous Humour which formerly were wont to fall by the ſpinal Nerves into the feet, to the ſeat of the Gout, afterward being depoſed by the Nerves of the *Par vagum* and *Intercoſtale* in the Ventricle, raiſed continual Troubles in it, which at laſt partly reſtagnating in the Brain, and partly being conveyed into the Nerves of the Heart, were followed by thoſe affects of the Leipothymia, Vertigo, and Delirium.

The Theraputick method ſuggeſts three primary Indications, whereof the firſt being curatory, is uſed only in the Fits, for the appeaſing, or ſooner putting an end to the Pains: The ſecond being preſervatory, and appointed for the intervals of the acceſſes, endeavours to remove the Procatarxis of the Diſeaſe, ſo that the invaſions of the Pains may return but ſeldom, or more mildely, or not at all. The third being vital, orders by what kind of dyet, and with what Remedies, the ſtrength may be ſupported among the ſaid Tortures, and Life, notwithſtanding the frequent and almoſt continually troubleſome oppreſſions of the Diſeaſe, may be prolong'd, and withall reinvigorated.

The firſt indication, viz. the appeaſing of the Pains, contains theſe two cheif intents: viz. That the Solution of Continuity be taken away, and in the mean while that the irritation or excandeſcency of the Fibres, or of the Spirits abounding in them, be allayed.

1. To take away the Solution of Continuity in the places affected, both the fluxions of the Humours which are apt to tend thither ought to be ſtop'd, and the *Minera* already there ſticking ought to be diſcuſs'd or diſſipated, and its Particles be reſtrained from their mutual Effervescencies. For theſe ends evacuating and altering Remedies, and both of them, as well inward as outward, are appointed: we ſhall ſet down certain ſelect Forms and wayes of Adminiſtration of theſe in order.

Blooding in a new Gout, or which is not very inveterate, and eſpecially in a hot conſtitution, being uſed about the beginning of the Diſeaſe, often gives relief: but in an habitual Diſeaſe, alſo in a cold temperament, and in old Age, it is wont to do more hurt than Good, in as much as it depreſſes the vigour of the Blood and Spirits, which are not too exorbitant, without a diminution of the morbifick matter.

Concerning Purging about the beginning of the Diſeaſe, the thing is very much controverted, whilſt ſome Phyſicians religiouſly abſtain from all Purging, before the declination, or end of the Fit; and others on the contrary conſtantly give ſtrong Purges about the beginnings of the Diſeaſe: the reaſon of the difference ſeems chiefly to lye in this, viz. that in ſome gouty Perſons, who are yet firm in the Conſtitution and Tone of the Humours and the containing Veſſels; and whoſe Joynts are not yet weakned, as often as the Blood and Nervous Liquour are troubled by a Medicine, their Superfluities and Recrements are not preſently precipitated into the *Minera* of the Diſeaſe, but yielding to the Medicine irritating and ſtirring them, they are drawn from the Mouths of the Arteries into the Cavities of the Inteſtines; and mean while the emptied Veſſels withdraw or drink up again a part of the morbifick matter: but on the contrary, in tender and weakned conſtitutions, upon the gentleſt commotion of a Medicine, the Recrements of both humours fall into the Place troubled with the Gout. To thoſe therefore with whom purging agrees, it ought to be ordered with a ſtrong and exagitating Medicine: for this purpoſe are vulgarly famous the *Electuary Caryocoſtinum*, *Syrup of Buckthorn*, *compound Powder of Hermodactls*, *Pilul. ex duobus*, *Pil. Rhaſis*; which, if we may believe the Authour, will make ſuch as are not able to goe, preſently to walk about.

Take of the beſt Aloes half an ounce, red Roſes two Scruples, Hermodactls pill'd a dram and a half, Diagridium a dram, Honey of Roſes what ſuffiſes, make Pills. Rodericus a Fonſeca wonderfully extolls the roots of black Hellebore, and amongſt other things, an Apple with the Fibres of it ſtuck in it to half a dram, roſted under the Embers and eaten.

Take Calomelanos a Scruple, Roſin of Jalap three grains, or of Scammony three grains, Oyle of Cloves a drop, Balſam of Peru what ſuffiſes: make three or four Pills for one doſe.

In

In purging, what *Solenander* preſcribes happily may be of ſome moment; viz. by putting a Plaiſter, or ſome other defenſive Medicine on the place, to hinder the falling of the humour to it.

Vomiting, with thoſe with whom it uſes to be ſafe and eaſie, does well alſo in this Diſeaſe; for which end the *Emetick Tartar of Mynſicht, Sulphur of Antimony*, its *Flowers, Mercurius Vitæ, Vinum Emeticum, Gutta Gamba may be given.*

Moreover, in a Fit of the Gout, *Powders of Stones, Bones, and Shells*, and alſo of *ſmart Vegetables* do good, which being ſaid to be the Antidotes of this Diſeaſe, ſubdue all Particles, and fermenting with them, mortifie them as it were, and at length being ſubjugated, ſend them forth by Urine, or ſwear.

Take compound Powder of Crabs Claws two drams, Ivory, Roots of baſtard Dittany, Roots of male Peony of each a dram, Lignum Aloes, yellow Saunders of each half a dram, make a Powder, let it be taken from half a dram to a dram, either by it ſelf in a Spoonful of red Poppey water, drinking after it ſix Spoonfuls of the ſame, or let it be made into a Bolus, or Pills with Venice Treacle, or Venice Turpentine what ſuffiſes; the doſe is a dram twice a day, drinking after it of the diſtilled water beneath preſcribed, two or three ounces. Or,

Take of the ſame Powder ſix drams, conſerve of Clove-gilliflowers and Betony Flowers of each an ounce and a half, Diaſcordium two drams, Syrup of Meconium what ſuffiſes, make an Electuary, the doſe is a dram, to two drams Evening and Morning.

Mean while that theſe things are done for withdrawing elſewhere the morbifick Matter which would flow into the places affected, or for ſending it forth, let altering and qualifying Medicines likewiſe have their turns, which may appeaſe the Turgeſcencies of the Blood and Nervous Juice, and ſtop the fluxions of the Recrements falling from them; for this end a thin diet, and a drinking of Water (if it be proper) being ordered, let *Emulſions, Juleps, Apozemes* of mild things and Anodines be preſcribed.

As to what concerns the other Scopes of curing, viz. the diſcuſſion of the Minera ſticking in the Parts, and the mitigating the excandeſcencies of the Fibres and Spirits; we muſt inſiſt firſt on this latter, without the performance of which we cannot anſwer the other intent: for this end therefore it is expedient to uſe both outward things, viz. *Topicks* of various kinds, and inward things, viz. *Hypnoticks*.

There being a vaſt number of *Topicks*, they either being only *Anodines*, have regard to the Pain it ſelf; or levelling at this, together with the Tumour, they are either Repercuſſives, or Reſolvents and Diſcuſſers; there are various Forms and Wayes of Adminiſtrations of every kind of theſe: but thoſe of cheifeſt uſe are wont to be Fomentations, Cataplaſms and Plaiſters; we ſhall ſet down ſome of the moſt noted of theſe, and firſt *Anodyne Applications*, which moderate the Fibres and

and appeaſe the Spirits by a certain ſoothing: for this uſe, a *Cataplaſm of Milk and Crum of Bread*, or of thoſe things with the *poundings of the Leaves and Roots of Mallows and Althea*, and the like, are every where in common Practice with the Vulgar.

Others commend a *Cataplaſm of freſh Cow-dung* applyed warm.

Take Water of Night-ſhade, or of the Spawn of Frogs, of each ſix ounces, Saccharum Saturni a dram, mix them, let linnen Cloaths dipt in this be applyed warm.

Take of red Lead three ounces, diſtilled Vinegar two pounds, digeſt them for many dayes: let either this Liquour by it ſelf, or a Water drawn from it by diſtillation be uſed for a Fomentation.

Alſo a diſtilled water made of the Tincture of Verdigreaſe diſtilled in Vinegar, often appeaſes Pains.

I was told by a Gentleman often troubled with a ſevere Gout, that he, in the cruel Tortures of that Diſeaſe, had always preſent eaſe from a *Fomentation with a Water diſtilled from the contents of a Bullocks paunch newly killed.*

Againſt extream Tortures of the Gout *outward Narcoticks* ſometimes ought to be uſed.

Take Leaves of Henbane, and Hemlock of each three Handfuls, let them be put into boyling Water, and as ſoon as they grow tender, let them be taken forth; to which, being bruiſed, add *Powder of the Flowers of Cammomil about two drams, the yolk of one Egg, make a Cataplaſm.* Or,

Take Tincture of Saffron made in Spirit of Wine four ounces, Camphire and Opium of each a dram, let there be a cloſe and warm digeſtion till they are diſſolved; let the part that pains be anointed with this Liquour: there are innumerable Medicines of this kind every where to be found in Books of Phyſick, and are every where wont to be preſcribed by every vulgar Perſon; which likewiſe may ſuffice for fulfilling the other intent, to wit, the repercuſſion of the Humours, if at any time it ſeems to be indicated.

As to what regards reſolvent, and diſcuſſing Topicks, ſuch are not required, which only open the Pores, that the Serum may evaporate, and the Blood may be reſtored to Circulation, as in a *Phlegmon* or *Ædema*, but whoſe ſaline Particles being deſtinated for ſtrongly aſſaulting the ſaline Particles of the *Arthritick Minera*, may either draw them forth by laying hold of them, or, by precipitating them, keep them from their Pain, cauſing Effervеſcencies: wherefore, in this Diſeaſe, when Fomentations, or Cataplaſms of *Chammomil, Mallows, Marſhmallows, Linſeed*, and *Fænugreek ſeeds* do little or no good, nay often much offend the nervous parts by relaxing them, the Diſſolutions, or Stillatitious Liquours of Sal Armoniack, Sea-ſalt, Nitre, Vitriol, quick Lime, and the like; which in other Humours and Pains are always offenſive, are wont to prove very beneficial.

Theſe

Of theſe kinds of Liquours to be applyed to the part pained in Fits of the Gout, ſeveral are preſcribed by *Quercitan*, *Crollius*, *Hartman*, and other Chymiſts; which ſince other famous Phyſicians, upon frequent tryals have approved off, we conclude them to have given relief for the foreſaid reaſon.

I need not repeat here the forms of theſe; as I could ſuggeſt many other Preparations of the ſame ſort, I ſhall here only add one or two.

Take Salt of Tartar and Armoniack powdred of each two ounces, diſſolve them in four pounds of Rain-water or Fountain-water: let it be uſed lukewarm with Linnen-Cloaths dipt in them.

Take ſpirit of Vitriol not rectified a pound, Sea-ſalt calcin'd and powdred a pound, mix them, and diſtill them in a Glaſs Retort with a ſand heat; there will come forth a pure ſpirit of Salt, to wit, which being driven from its ſeat by the diſtilled Liquor of the Vitriol, and leaving to it its poſſeſſion, will eaſily aſcend: to the Caput mortuum pour Spirit of Wine two pounds, make a cloſe and warm digeſtion, adding of Camphire two drams, let it be applyed warm to the part grieved with Linnen Cloaths.

Take filings of Iron, Flowers of Sal Armoniack of each ſix ounces, mix them by boyling them together, let it be diſtilled in a Glaſs Retort till the Flowers are ſublimed: to the caput mortuum bruis'd pour ſpirit of Wine, digeſt, and keep it for uſe.

I have heard that ſome for appeaſing Pains of the Gout, *put the foot affected in a bag fill'd with Sea-ſalt calcin'd and powdred*, from which they ſtill expect a certain and quick relief.

In the declination of the Fit, to ſtrengthen the part, and to diſcuſs the remainder of the morbifick matter, Plaiſters are uſefully applyed, which nevertheleſs do not all agree indifferently with all Perſons; but with theſe more hot, with others leſs hot, tho with moſt thoſe are wont to be moſt efficacious, in which are *red Lead*, *Litharge*, *Mercury*, and other mineral or ſaline things, we uſe chiefly a *Plaiſter of red Lead*, *Ceruſſe*, *and Soap boyled with Oyle*, *or take the red Lead* Plaiſter *two parts*, *Paracelſus's Playſter one part*, *mix them and ſpread them on Leather.*

Inward Remedies to be uſed againſt Pains of the Gout, are in a manner only Narcoticks, which ought to be given in a cruel and long continued Pain. Of theſe we moſt commend *Preparations of Opium*, *with Salt of Tartar or its Tincture.* Moreover, for this uſe *Paracelſus's or the London Laudanum*, *Pilul. de Styrace*, *de Cynogloſſo*, *Syrup of Meconium*, *Venice Treacle and Diaſcordium* are wont to prove beneficial.

The ſecond indication called preſervatory, has reſpect to the removal of the Procatarctick Cauſes of the Gout; ſo that the Fits of the Gout may moleſt with invaſions more ſeldom, and leſs, or not at all. For this end evacuating, altering, and corroborating Remedies, together with an exact form of Dyet are preſcribed to be uſed out of the Fits.

1. There-

1. Therefore Gouty persons ought to Purge solemnly *Spring and Fall*: and it will be convenient then to give a *Vomit*, if nothing indicates the contrary, and afterward to repeat it sometimes by intervals. Those who have a strong Stomach and *Præcordia* may take *Mineral Emetick*s, prepar'd of *Antimony* and *Mercury*: Those who are of a more tender constitution, after having eaten slippery food, may take *Wine of Squills*, or *Salt of Vitriol with Whey*: Afterward, the Stomach being filled with warm Water, or plain Posset-drink, or with the leaves of *Carduus* boyled in it, let a Vomiting be raised twice or thrice, or oftner. For Purging to be used also frequently at fit intervals of time, the forms of Purges above prescribed may be proper enough. Or,

Take threads of black Hellebore cleansed an ounce, lignum aloes, Cloves, of each two drams, being bruised, pour to them of Spirit of Wine not rectified, two pounds; let there be a close and warm digestion for many days; the dose is two or three spoonfuls in the morning twice or thrice a week, and let Vomiting and Purging always be begun before the Equinoxes, lest haply the fit, hapning first, may prevent the course of Physick. Blooding, or opening of the hemorrhoid Vessels are sometimes proper Spring and Fall to Persons of a hot temperament and a sharp Blood; Cauteries made in the Arms and near the Shoulder-blades are useful in a manner to all that are obnoxious to this Disease.

Moreover, altering Remedies, call'd by the Ancients the Antidotes of the Gout, are of excellent use, and being taken for a long time, together with an exact governance as to the six nonnatural things, often give great relief: In this rank, Medicines endow'd with a *Volatile Salt*, or a *Balsamick Sulphur*; to wit, inasmuch as these exalt the *fixt Salt*, and those reduce the *acetous*, are accounted the chief; again, *bitter* and *astringent* things, as the Herbs *Germander*, *Groundpine*, *Centory*, *Roots of Gentian*, and *Birthwort*, &c. (since they are approv'd of by experience in this Disease) seem to be profitable for this reason that they help the offices of Concoction and Chylification, and keep the *saline fæculencies* from being carried into the Blood. Let us set down certain forms of each of these.

Take Powder of Groundpine six drams, Crabs-eyes two drams, Venice Turpentine what suffices, make small Pills, let three or four be taken in the evening and morning for thirty or forty days; drinking after it of the following distill'd Water two or three ounces.

Take leaves of Cypress, Firr, Mistletoe growing on Apple-trees, of each six handfuls; Roots of Avens, the great Burr-dock of each a pound, the outward rinds of ten Oranges and six Limons; Nutmegs, Mace, of each an ounce, being all slic'd and bruis'd, pour to them of fresh Milk seven pounds, Malaga Sack a pound, let them be distilled according to art; let the whole liquor be mixt.

Or let a plain Water be prepared of the leaves of the great Burr-dock, cohobating it twice or thrice on fresh leaves. Take

Take Powder of the Seeds of the great Burr-dock six drams, Crabs-eyes two drams, Nutmegs half a dram, Balsamum Capivii what suffices, make a mass, and let it be made into little Pills, let four be taken in the evening and morning for many dayes.

Take Tincture of Antimony an ounce, the Dose is twenty drops to twenty five in the evening and early in the morning, with three ounces of the water even now describ'd.

To poor People I use to prescribe after this manner. *Take powder of the leaves of Sage half a pound, Crabs-eyes, Saccharum Crystallinum of each two ounces: mix them, let it be kept in a glass, let a spoonful be taken twice a day with a draught of the decoction of the leaves of Sage, or of the roots of the great Bur-dock.*

Or, let *Dornorellus his powder* be prescribed to be taken after the same manner.

Take powder of the leaves of Germander, Ground-pine, the lesser Centory, Marjoram, Sage, Betony, roots of Gentian, round Birth-wort, of each an ounce, Sugar a pound, mix them, make a powder.

Or the Powder of Johannes Anglicus, *called by him Saracenicus.*

Take powder of the Leaves of Ground-pine an ounce, of the Bones of Mans-foot burnt two drams, Licorice three drams, mix them.

For ordinary drink let a Bochet be prepared of Sarsaparilla, Saunders, Lignum Rhodium, shavings of Ivory and Harts-horn, &c. *Or,* let a *small Ale* be prepar'd for a Vessel of four Gallons: in which instead of Hops let the *leaves of Germander and Ground-pine be boyl'd*: and after it has wrought, put into it of the *leaves of dry'd Sage four handfuls, Sassafras two ounces, Roots of Avens eight ounces.*

Among altering things, a Milk Dyet does not claim the last Place; *viz*, that the Patient use no other Dyet for three or four Months; Morning and Evening let him drink *Milk as it comes from the Cow*; about Noon let him Eat of it boyl'd with White-bread, Barley, or Oatmeal. I have known some who by this kind of Dyet have found great Relief; and that others have been much worse after the use of Milk, and the Gout being not cured, to have contracted great Obstructions of the Viscera and a Cacochymia. Therefore, let not that Method rashly be entred upon without the advice, and careful observation of a prudent Physician whether it agrees or not.

Not long since, it grew a vulgar Custom for Gouty Persons to drink every Morning their own Urine, which I remember to have done good to some: The reason of which relief seems to be, that the Saline latex of the Urine, passing again through the Blood, carried with it the Salino-fixt Particles, which were wont before to be convey'd to the Joynts: Wherefore this Method, if at any time it gives ease in the Gout, for the most part it encreases the Nephritick affect.

A very Learned and Pious man, the Glory both of our Nation and of Learning, *D. D. H. H.* having lived for many years greatly obnoxi-

ous to frequent fits of Pains, Vomiting, and piſſing Blood, at length, upon the conſtant uſe of the following Remedies, becoming almoſt free from the Nephritick affect, he liv'd above ſeven years without any very great Fit of it. The Method of Cure which a certain Gentleman had taught him, without any Phyſick, was thus, Abſtaining from Wine and Cyder, he drank for ordinary Drink a ſmall Ale made of Oaten Malt; Moreover, once a week he took in the Morning a draught of the ſame Ale to about half a pound, with three ſpoonfuls of the Powder of *Oſſa Senelorum* diſſolv'd in it: by the uſe of theſe things ſeeming to have bid farewel to the Diſeaſe of the Stone within four Months, he preſently begun to be troubled with the Gout, and was often infeſted with ſevere Fits of it during all the time of his being free from the Stone; and at length, upon every little occaſion, he became ſo obnoxious to them, that if preſently after Eating he any way exercis'd his Body or Mind, *viz.* either by walking or ſtudy, he certainly expected invaſions of the Pains; the reaſon of which was, that the Blood being ſaturated to a fulneſs with Salino-fixt Particles, and the Nervous Liquor with Acetous, when, upon a freſh ſupply of Nutritive Juice, they were ſtir'd and grew turgid, preſently they depoſed their Superfluities, *viz.* the morbifick matter of both kinds in the Joynts, as being very weak.

Therefore that Venerable Perſon, being tired with ſo frequent and almoſt continual a Torture, by the Advice of a certain Friend drank his own Urine every Morning, by the uſe of which, within a Month or two he was tormented ſomewhat leſs with his Pains of the Gout, but by an ill change the Nephritick affect begun to come upon him again; for he was often affected with a Pain about the Loins, with a Vomiting, and Dyſuria, which being not to be overcome by any Remedies, caus'd the Death of the Renowned Perſon after about a Fortnight.

The Body being opened, all the Viſcera excepting the Reins appeared very ſound and firm, but the right Kidney ſeem'd to have been almoſt conſum'd long before, there remaining only a little heap of Glands, all the Veſſels and the Ureter growing together, and being wholly ſtop'd, that no Urine had paſs'd there for a long time; The left Kidney being large enough, contain'd a great heap of Gravel-Stones within it's Cavity and Ductus's. Moreover, a round, hard, and whitiſh little Stone being fallen about three Inches deep into the Ureter, and there ſticking, had wholly ſtop'd the Paſſage of the Urine, the Membrane of the Ureter, where the Stone ſtuck, was become ſo thick and callous, and conſequently without Pain, that it could not be ſtirred thence by any means upward or downward.

It ſeem'd in this Caſe, that whereas the Coagulative Particles of the Blood and Nervous Juice, viz. Salino-fixt, and Acetous firſt meeting together in the Reins, had long cauſed the Nephritick affect; afterward, by the uſe of that aboveſaid Powder the Saline being ſtill

ſent

ſent into the habit of the Body, and not readily convey'd forth, heaped together a Seminium for the Gout in the Joynts, the Reins in the mean time being almoſt free: but at length, when *by drinking his own Water the Saline-minera was brought back to the Reins, the Diſeaſe of the Joynts was changed into a fatal Nephritis.*

CHAP. XIV.

Inſtructions and Preſcripts for curing the Colick.

OF what right we place this Diſeaſe among the affects of the Brain, and the *Genus Nervoſum*, it is intimated in the foregoing Chapter, to wit, in reſpect of the Symptoms chiefly preſſing, which are Pain and Convulſive Motions, ariſing thence.

Concerning the word Colick taken from the Inteſtine Colon (which vulgarly, tho falſely, is ſuppoſed to be chiefly affected in this Diſeaſe) we ſhall not contend; the affect may be deſcribed, *that it is a mighty Vellication of certain Parts of the Abdomen*, whence a very acute pain, to which for the moſt part a vomiting, alſo Cramps and Contractions almoſt of all the Viſcera of the Belly are wont to be joyned. For the Navel and its neighbouring parts ſometimes are drawn inward as it were with a certain perforation, ſometimes they ſwell out with an inflation, and a great ſpringing forth as it were; the inteſtines, by an inverted motion of the Fibres, are often drawn upward: Wherefore the Belly, being mightily bound, diſcharges little or nothing at all, nay, tho it be frequently provok'd by Clyſters, it does not eaſily depoſe its contents. That the Ventricle is likewiſe convuls'd with the *Duodenum*, and gall-Bladder, it plainly appears from the copious vomiting and caſting forth of the yellow or green Choler: ſometimes alſo the Ureters, and the Bladder which contains the Urine are ſo contracted, that during the whole Fit the Urine is either ſtop'd, or voided more ſparingly: beſides, in the Head vertiginous affects frequently preceed or follow the invaſions of this Diſeaſe: nay, and the Colick encreaſing and becoming inveterate, often brings Pains in the outward Members, and at laſt is terminated in a Palſey: Since therefore many Parts are wont to be troubled by it, we muſt enquire which is primarily affected, and by the means of which the reſt ſuffer, and ſhew what is the conjunct Cauſe of this Diſeaſe; in what place it ſubſiſts, and whence it draws its Origine.

As to the Part primarily affected, when the Diſeaſe preſſes, the whole region of the Belly is wont to be troubled, yet its primary ſeat ought to be plac'd where the pain infeſts chiefly, and ſticks moſt obſtinately. Now this is ſaid by many Phyſicians to be ſomewhere in the Colon, becauſe we generally obſerve, that the Inteſtines, and chiefly the Colon, being irritated by *Flatus*'s, by which choler and haply other humours, contained within their cavities, fall into pains and gripes; but if the pains of the Cholick proceeded from the ſharp and irritative contents of the *Colon*, doubtleſs thoſe things which looſen the Belly, and copiouſly expell *Flatus*'s and the *Fæces*, would bring a moſt certain relief: the contrary of which oftentimes happens, *viz.* that after frequent, or violent Purging, that Diſeaſe becomes worſe.

Wherefore, that the ſeat and nature of this Diſeaſe may be duely known; we muſt firſt diſtinguiſh here concerning the Gripes or Pains of the Belly, vulgarly accounted as of the Colick. For either, being meerly occaſional, they ariſe from an evident cauſe alone, and without a previous diſpoſition in any Perſon indifferently; thus alterations about the ſix non-natural things often raiſe mighty diſturbances in the *Viſcera* of the Belly with pains: Which kind of affect nevertheleſs ought not to be lookt upon as a Diſeaſe, but only as a ſymprom rais'd from a manifeſt cauſe.

But beſides, the Colick properly ſpeaking, does not only happen to any men indifferently, being produc'd by an accidental cauſe, but following ſome men prediſpos'd after a peculiar manner, depends wholly on a procatarctick cauſe brought to a ripeneſs by degrees: the greater fits of the Diſeaſe for the moſt part have their periods, and obſerve the alterations of the Air, and of the Year. Moreover, being rais'd, they do not eaſily yield to Remedies, nor ſoon paſs off: But notwithſtanding the uſe of *Epithems*, or the Belly's being purg'd, tho in a plentiful manner, by Clyſters or Catharticks, they often continue many days, and ſometimes weeks with great violence; the pains in every fit take always to the ſame Part, and for the moſt part are attended with the like concourſe of other ſymproms: Moreover, Colick pains, tho they have not the ſame ſeat in all; but ſometimes rage moſt about the Ventricle, ſometimes about the Navel, or hypochondres, ſometimes in the hypogaſtrick Region, or toward the Loins: Yet as often as they return in the ſame Diſeaſed, they moſt commonly obſerve the ſame ſeat.

I ſay now, that the Part primarily affected in the Colick is the Meſentery: We have ſhewn elſewhere that the cauſes of certain convulſive motions, which are vulgarly called *hyſterical*, oftentimes lye hid in the *Plexus*'s of the Meſentery: and then we aſſerted the pains of the Colick ſometimes to have their ſeats in the ſame places, and we made it plain enough from Anatomical obſervation. But it is not the ſame,

ſame, but ſomewhat a differing matter which is wont to raiſe thoſe ſo different affects under the ſame roof: in the Paſſions called hiſterical, we have ſet forth at large in the former Tract, that the Animal Spirits being overcharg'd with an Elaſtick Combination, burſt from one another, or, are exploded as it were, and conſequently that they force in deſpite the containing Bodies into irregular or preternatural motions: but in pains of the Colick the ſame Spirits being irritated by reaſon of a Matter annoying them, and being diſproportionate to them, and thereupon being divided and ſevered from each other, they force the ſenſible fibres to very troubleſome corrugations: after what manner this is done in the Colick, and what is the Conjunct cauſe and Procatarxis of that Diſeaſe, we ſhall now ſay ſomewhat more plainly.

Therefore, for the *Seminium* or *Minera* of the Colick, we ſuppoſe that certain recrements of the nervous humour falling from the Brain by the Nerves, and paſſing into the *Meſentery, and other Plexus's of the Abdomen*, are there heap'd together. Which, if they are ſo groſs and viſcous, that they cannot be receiv'd and ſent away by the *Lymphæducts*, or diſtill forth into the cavities of the Inteſtines by the ſmall branches of the Veſſels, then ſtagnating and being heaped together by degrees in thoſe Parts, they ariſe at length to an irritative plenitude: Afterward, that matter becoming more degenerate, and more offenſive by ſtagnation, and growing turgid on ſome occaſion, or of its own accord, or haply fermenting with the *Salino-fixt humour* ſent thither from the Blood, will torture with very troubleſome and painful corrugations the branches of the Nerves and Nervous Fibres, with innumerable of which the *Meſentery* is ſtor'd. Which affect of them does not wholly ceaſe till the fermenting matter either is diſcuſs'd, or expreſs'd into the cavities of the Inteſtines, or at length is ſubdued.

Again, foraſmuch as from the *Meſentery* and its *Plexus*'s, nervous branches and fibres are moſt thickly protended to the bottom of the Ventricle, the Gall-Bladder, the Ductus Choledochi, all the Inteſtines, and on every ſide almoſt into all the *Viſcera* of the Abdomen; therefore, whilſt the Colick matter, fermenting in its *Minera*'s, cauſes there often moſt ſharp gripes and tortures, at the ſame time in moſt other membranous Parts, Cramps and Convulſive or painful contractions will be every where raiſed. Hence, by reaſon of the Meſentery primarily affected under the Navel, there is a cruel pain, as tho a ſtake were ſtuck there, or a piercer were making a hole; moreover, all about almoſt in the whole Abdomen, by reaſon of the Inteſtines being variouſly drawn forward and backward at the ſame time in differing places, erring pains ſhoot this way and that; and by reaſon of the motions of the Fibres being diſtracted or inverted, as well in thoſe parts, as in the primary Veſſels, the Belly is in a manner always bound, and there enſues ſometimes a ſuppreſſion of Urine, or very little is made. Moreover, the *Duodenum*, the Gall-Bladder with

with its Ductus's, and the bottom of the Stomack being affected with a cramp, and their Fibres being drawn upward, a frequent vomiting, with a copious casting up of a yellow or greenish Choler often happens during the Fit.

In a Fit of the Colick, to Pains of the Belly most violent Pains of the Loins raging in the lower part of the Back are oftentimes joyned, which certainly can arise from the irritation of no Intestine, but it will be easie to conceive that they are raised from a morbifick cause plac'd in the Mesentery: viz. in as much as certain considerable Nerves of the Loins enter the great *Nervous Plexus* of the Mesentery: so that hence not only painful Convulsions are conveyed by consent from one part to the other; but it is likewise probable, that certain Recrements of the Back also and of the Loins are derived into the Mesentery by this Passage, and that in some sort for this Reason scorbutical Persons are so very obnoxious to gripes of the Belly, and to its loosness.

As to the Procatarxis of the Colick, it consists chiefly in these two things, viz. first, that many Recrements are heap'd together in the nervous Liquor, and secondly, that they being chiefly received by the Nerves appointed to the Viscera of the Belly, and conveyed to the Mesentery, make there the morbid Mineras. First, the former of these for the most part happens through the fault and distemper of the Brain, to wit, for as much as this admits within its Precincts, together with the Nervous Juice, heterogeneous Particles, and such as trouble the animal œconomy, and does not readily discharge other ordinary Recrements by fit common Sewers: Wherefore the incongruous matter, since it cannot be otherwise sent from the Brain, most readily rushes into the Nerves of the *Par vagum*, which are very open for it: and for this reason it is that Women, upon any disorder of the Brain, frequently contract the Hysterick habit; to wit, in as much as the Recrements of the nervous Liquor, whether they are convulsive and elastick, or only painful and irritative, being apt to be depos'd in the *Par vagum*, so generally raise convulsive Symptoms, as well as those of the Colick. Secondly, that this matter running into the *Par vagum* of the Nerves, is deposed in the Mesentery, or in other plexus's within the Abdomen, the reason is, that many, and the greater Nerves of that Conjugation, are ultimately terminated in these Nervous Plexus's. Wherefore, if the Recrements of the Nervous Humour subsiding here as it were to the lowest place, can neither be carryed back by any Vessels, nor pass into the Cavities of the Intestines, of necessity the same must make morbid Seats in this Part.

The evident Causes are of two kinds, viz. First, such as being injurious to the Brain and Genus Nervosum, make a greater encrease of the morbifick Matter: or, secondly, such as by agitating the Blood and Humours, rouse up the Minera's heap'd together and before lying still, and stir them to Pain causing Effervescencies. It would be tedious to examine

examine here the manifold and diverſified Occaſions by which the Pains of the Colick are ſtirred up in Perſons prediſpoſed to them; for both great Diſorders in the ſix non-natural things, and changes of the Air and of the Year, and likewiſe the Medicines themſelves (from which relief is expected) being unſeaſonably given, often bring theſe.

As to the Prognoſtick of the Colick, it is vulgarly enough known, that an accidental Colick, viz. raiſed from an evident Cauſe alone, is moſt commonly ſafe, and cured without much adoe; but that an habitual one is both eradicated with great difficulty, as to its Diſpoſition, ſo that the Fits may no longer return, and that ſometimes the Fits themſelves notwithſtanding Remedies are very obſtinate, and perſiſt for many Dayes, nay Weeks, and ſometimes Months.

2. A Colical Diſpoſition frequently enſues upon intermittent Fevers of long continuance, and upon continual Feavers of an ill determination, viz. in as much as the Nervous Liquor being mightily vitiated, heaps together many Recrements which are depos'd deep in the Plexus's of the Abdomen, as Receptacles the moſt open: Moreover, for this Reaſon an epidemical Fever has reigned ſome years, to which a Colick has been joyned as a pathognomick Sign: hence, in like manner, a long continued and growing Scurvy, for as much as it perverts the nervous Liquor, brings alſo the Colick.

3. After that the Colick Pains have raged ſome time in the Belly, they oftentimes aſſail the Loins, and afterward, the Diſeaſe increaſing, the Limbs, and almoſt all the Muſcles in the whole Body, and at length are often terminated in a Palſey, which certainly is a manifeſt ſign that the morbifick Matter is not conveyed by the Arteries, but by the Nerves, and that its ſeat is not the Cavities or Tunicles of the Inteſtines, but the nervous Plexus's of the Meſentery: for that the Pains of the Loins happen upon gripes in the Belly, beſides that the Nerves of both Places communicate, the cauſe alſo is, that the morbifick matter being much encreaſed in the Head, gets not only into the *Par vagum* but alſo into the ſpinal Marrow, and falling to its lower part, it firſt cauſes Pains to ariſe in the Loins, and afterward many other Nerves which proceed from the Spine being affected, it cauſes the like in the Members, and other Muſcles; finally, the Ductus's of the Nerves being ſtuft by the Morbifick Matter heap'd together to a plenitude in them, the Palſey is cauſed.

4. A fierce Colick, and very violent, whoſe cauſe is an inflammation or abſceſs of ſome inteſtine, for the moſt part brings a mortal Iliack Paſſion.

The Therapeutick Method in the Colick, as in moſt intermitting Diſeaſes, ſuggeſts three primary Indications. Wherefore, the firſt, which is curatory, being to be uſed in the Fit, has regard to the appeaſing of the Pains, and to the ſpeedy and eaſie removal of the acceſs

ceſs of the Diſeaſe. The ſecond being preſervatory, teaches what is to be drawn out of the fit for taking away the cauſe of the Diſeaſe, that the fits do not often return, or prove ſorely offenſive. The third being vital, furniſhes Remedies for preſerving the ſtrength, and refreſhing the Spirits during the Gripes and cruel Tortures. We ſhall ſpeak of each of theſe a little more at large in order.

1. We have regard in a manner only to the curatory Indication in an accidental Colick; for the evident cauſe, which is the irritation of the Inteſtines by the ſharp contents being removed, the Pains for the moſt part ceaſe of their own accord, nor is a Relaps feared without a like occaſion: Wherefore, for the ſpeedy cure of this Diſeaſe, there is a practiſe proper enough known by every vulgar Perſon, viz. Preſently to adminiſter *emollient Clyſters*, *topical Anodines*, and *Narcoticks*; to which, if there be a Fever, or it be feared, blooding is often joyned with benefit. We ſhall preſently ſet down Forms of theſe and the order of uſing them in the cure of the habitual Colick.

Therefore, for the curing the Fit of this Affect, there are two chief Intentions. viz. both the painful Solution of Continuity ought to be removed, and the Excandeſcence of the Fibres or Spirits in them to be appeaſed. On the account of the former, we muſt endeavour both that the matter ſticking and fermenting in one or more *Mineras* be either diſcuſt, or ſubdued, and in the mean while that the afflux of a new Matter be ſtopt; the ſecond Intention, on which we muſt inſiſt in the firſt place and without intermiſſion, is performed chiefly by Anodines and Narcoticks: after what manner, and by what Remedies all theſe things are to be done methodically, we ſhall deliver.

The cure of the Pain of the Colick is begun moſt commonly, and proper enough by a Clyſter, let this in the firſt place be only lenifying and emollient: by which, as by an inward Fomentation, the corrugations of the Fibres may be mitigated, and the raging of the Spirits be appeaſed: for this end, *warm Milk with Sugar*, *or Moloſſus*, *or Syrup of Violets*: *alſo emollient Decoctions of Mallows*, *Marſh-mallows*, *Herb Mercury*, *and the Flowers of Melilot*, *Elder*, *with Oyle of Almonds*, *or of Olives*, *alſo a Decoction of a Sheeps-head*, *or Calves Feet are proper*: ſometimes a *Clyſter of meer Oyle of Olives or of Linſeeds* are wont to give help before all others.

But in caſe mild Clyſters do not eaſily come away, or not looſen the Belly, let ſuch be uſed as irritate more, and preſs, and draw out by force as it were the Humours from the little Mouths of the Arteries: for this end, let *carminative or bitter Decoctions* be prepared, in which let the *Electuary Diaphœnicon*, *Diacatholicon*, *or e baccis Lauri*, *or Species Hieræ be diſſolved.* Alſo to thoſe Liquors it is uſual to add *three or four ounces of the infuſion of Crocus Metallorum: or to a pound of an emollient Decoction, add of Venice Turpentine diſſolved with the yolk of an Egg an ounce, or an ounce and a half, or take Urine of a ſound man*

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a pound, Venice Turpentine diſſolved an ounce and a half, Moloſſus an ounce, mix them, make a Clyſter. I have known this often to have given a great relief; the reaſon of which ſeems to be that the balſamick Particles of the Turpentine comfort the inteſtines, and likewiſe being received by the Venous Blood, and circulated with it through the whole Body, they move Urine, ſo that a copious making of water often follows ſuch a Clyſter, and it always carries a ſmell of Violets, haply alſo the Particles of the Turpentine diffus'd every where, move the morbifick, or ſtagnating matter, or Incline that which is acetous, or otherwiſe degenerate, to a better Craſis.

Whilſt the Inteſtines are ſo waſht with Clyſters, and fomented, as it were, inwardly; let outward Epithems alſo be applyed to the Abdomen.

Take leaves of both Mallows, herb Mercury, Wallwort, of each four handfuls; flowers of Elder, Camomill, Melilot, of each two handfuls, a Calves-head cloven: Let them boyl in a ſufficient quantity of Fountain-water. Let the ſtraining be uſed for a fomentation, with linnen Cloaths dipt into it as warm as may be ſuffered, and wrung forth, and applied by turns; repeating it as often as the pains preſs violently. In the Intervals of the fomentation let a Cataplaſm or Liniment be uſed.

To the magma of the Herbs bruiſed add Outmeal what ſuffices, make a Cataplaſm, and let it be ſewn in rows in two bags of a ſquare figure, for covering the Abdomen: Let one of theſe be warmed at a time in a Platter on hot Coals, with Oyl of Earth-worms, or of Froggs, let it be put on warm, changing it aſſoon as it begins to grow cold.

Or, Take Oyl of Earth-worms, or of Froggs, what ſuffices, let the Part paining be anointed after the fomentation; and let cap Paper moiſtened be applied and worn.

The Cawl of a Lamb, or the Lungs, or other warm Viſcera of Brutes laid on the Belly, and often changed, ſometimes wonderfully appeaſe pains.

I have obſerved in ſome conſtitutions and temperaments, that Epithems of hot things, or applied hot; have rather encreaſt pains, than mitigated them: Wherefore in theſe caſes it ſeems neceſſary to order fomentations of the Solutions of *Nitre*, or of *Sal Armmiack*, or of other Chymical Liquors, as in pains of the Gout, ſometimes (as *Septalius* relates) of meer cold Water.

But if the Gripes of the Belly do not remit by the uſe of theſe things, we muſt uſe hypnoticks; *viz.* which being given in a ſet doſe, often give great truce: Mean while, for refreſhing the ſtrength and failing Spirits, and to order yet a greater *Apparatus* againſt the Diſeaſe.

Take liquid Laudanum tartarized from ſixteen drops to twenty, give it going to reſt in a ſpoonful of the water of Camomil-flowers, drinking after

it of the ſame ſix ſpoonfuls; let it be repeated every other or third night, if the pains are very preſſing.

In a hot conſtitution. *Take water of Camomil-flowers three ounces, Syrup of Meconium half an ounce, Aqua Mirabilis two drams, make a draught to be taken going to reſt.*

Mean while that theſe things are done for appeaſing pains, and either for diſcuſſing, or at leaſtwiſe looſning this matter ſticking in the morbid ſeats, let evacuating Remedies have their turns; to wit, both for wholly extirpating the Minera of the Colick, and for cutting off the ſupplies or fuel of it, that it grow no further. For theſe ends, a Vomit (where it agrees) and a gentle Purge; and alſo in a hot temperament, where a Fever preſſes, or is feared, Blooding ought to be uſed.

Take Sulphur of Antimony, from five Grains to ſeven or eight, conſerve of Borage a dram, give it in the Morning with Governance. In this caſe, according to the Judgment of a Phyſician preſent, *either an infuſion of Crocus Metallorum, or of Mercurius Vitæ, the Emetick Tartar of Mynſicht, an expreſſion of the Leaves of aſarum,* and in tender Conſtitutions, *Salt of Vitriol, and Wine, and Oximel of Squills may be given.*

Let Purges, leſt they naſeate the Stomack, which is diſtempered, be given only in a very ſmall Doſe, and in a meet Form.

Take Roſin of Jalap, and of Scammony of each five grains, Cream of Tartar a Scruple, Cinnamon powdred four Grains, make a Powder, or let it be made into Pills or a Bolus with conſerve of the Flowers of Borrage, or of Damask Roſes.

Take Scammony ſulphured half a Scruple, Cream of Tartar fifteen Grains, Diaphoretick Antimony a Scruple, make a Powder, let it be given after the ſame manner.

If a Fever does not preſs, give a doſe of *Stomak Pills with Gums*, or of *Amber*, either by themſelves, or with *Roſin of Jalap.*

Take Pilulæ Rudii from twenty Grains to half a dram, Laudanum one Grain, make four Pills, let them be taken going to reſt: theſe firſt bring ſleep, and purge in the morning. Or,

Take Calomelanos a Scruple, Roſin of Jalap ſix Grains, Scammony four Grains, Ammoniacum what ſuffiſes, make four Pills, let them be taken going to reſt. In a long continued Colick, when all other Remedies have done little or no good, I have often known this Medicine, given once or twice, to have raiſed a Salivation to the great relief of the Diſeaſed: for if at any time the morbifick Matter plentifully gathered together in the Nervous Plexus's, and other places about the Abdomen, and there firmly ſticking, is not able to be moved by other Medicines; the Mercurial Particles diſplaying themſelves every way eaſily diſſolve it, and divide it into minute parts, and drive them variouſly this way and that, and at length wholly diſſipate them. Wherefore in a long continued and obſtinate Colick, they may ſometimes be given with ſucceſs, in order to a gentle Salivation.

Baths

Baths and Sudorificks are generally wont to be prescribed in Pains of the Colick: tho, as far as it has appear'd to our Observation, seldom with good success: for these, by exagitating the Blood and nervous Humour, make them depose more yet of Matter into the Minera of the Colick, nay, and make the Matter there deposed ferment more and be more unruly, and very seldom perfectly discuss it.

Diureticks are wont to be given much more advantageously, by which, in regard the Blood is sus'd, and its Serosities are copiously precipitated, thereby the Fuel of the Disease is cut off, and the mass of Blood being emptied, receives into it a part of the morbifick Matter, so that the remainder of it is easily discust. For this end,

Take Spirit of Tartar excellently rectified half an ounce, let half a dram be given twice or thrice a day in a Spoonful or two of the following Julep, drinking after it of the same four or five Spoonfuls.

Take Water of the Leaves of the great Bur-dock, or of Aron, or Arsmart a pound, Water of the flowers of Elder and Cammomil of each four ounces, compound water of Gentian and compound Raddish water of each two ounces, Sugar six drams, mix them.

After the same manner as *Spirit of Tartar*, you may give in a meet dose, sometimes *Tincture of Salt of Tartar*, sometimes *Mixtura Simplex*, or *Spirit of Sal Armoniack succinated.*

Take Millepedes prepar'd two drams, flowers of Sal Armoniack tartariz'd a dram, Oyl of Nutmeggs half a scruple, Turpentine what suffises, make a mass, let it be form'd into Pills, let three or four be taken once or twice a day, drinking after it a dose of the Julep, or five or six spoonfuls of the following distilled Water.

Take fresh Millepedes cleansed a pound and a half, the yellow Coats of six Oranges, and of four Limons, Nutmeggs in number six, being slic'd small add to them Crum of stale white Bread a pound, all being bruised together and well mix'd, pour to them of fresh Milk four pounds, Sack two pounds, distill them according to Art, let the whole Liquour be mixt, and sweetned with Sugar, or Syrup of Violets, at pleasure.

In a long continued and obstinate Colick, where there are a hot Temperament and Viscera, purging *Spaw-waters*, or *Whey with Syrup of Violets* is often wont to be drank with great relief: for both Liquours, where they agree, being drank in a plentiful manner, cool the Stomack and hot Intestines, and presently ease and relax them being contracted with Cramps, and painful Corrugations, or being convulsively extended with Flatus's. Moreover, whence (I conceive) they chiefly give help, insinuating saline Particles of another Nature into the morbifick Minera, they conquer and subdue the Saline and Irritative Particles residing in it, and often carry them forth by purging.

In this Disease, since *all things* do not agree with *all Persons*, nay, nor the *same* always, or a long while with the *same Person*; there is need of the careful observation and daily advice of a prudent Physi-

ſician, that by *coindications* taken from things that do good good or hurt, the method of Cure may be rightly ordered, and now and then chang'd.

The Vital Indication ought to be joyn'd to the Curatory, and be now and then interchangeably us'd with it: for ſince the Diſeaſed, being almoſt continually affected with tortures, watchings, vomiting and abſtinence, often fall into faintings, and are ſometimes in danger of Life; let Remedies which ſupport the ſtrength, refreſh the Spirits, and procure certain times of truce againſt the Fits of the Diſeaſe, *viz.* Cordials and Hypnoticks have their turns.

Take water of the Flowers of Camomil and Elder of each four ounces, of Cinnamon hordeated, of the whole Citron of each two ounces, Pearl powdred a dram, Sugar four drams, make a Julep, let five or ſix ſpoonfuls be taken now and then.

Take powder of Pearl, Crabs-eyes of each a dram, divide it into four parts, let one part be given twice or thrice a day with the Julep, or with the Decoction of the roots of Contrayerva.

Take Conſerve of Clove-gilliflowers an ounce, Confection of Hiacinth, Alkermes of each two drams, Pearl powdred a dram and a half, Syrup of the Juyce of Citrons what ſuffices, make a Confection, let the quantity of a Nutmeg be given twice or thrice a day with a Julep.

In Conſtitutions that are not hot, *Spirit of Harts-horn, of Soot, of Sal Armoniack ſuccinated,* alſo *Tincture of Antimony, or of Coral,* often do excellently well.

Opiats in the Cholick are of neceſſary Uſe, without which the Diſeaſed can neither live, nor the Phyſicians be at any reſt or quiet. *Take water of Cowſlip-flowers three ounces, Syrup of Meconium half a dram, Aqua mirabilis two drams, mix them, make a draught to be taken going to reſt.*

If the pain, being very intenſe, will not yield to ſuch a Remedy, you muſt give *Preparations and Compoſitions of Opium. Paracelſus's, or the London Laudanum, Pillul. de Styrace or Cynogloſſo are proper, a Solution of Opium tartariz'd to ſixteen or twenty drops is wont to be of chief uſe with me.* Which Medicine I have truely given to ſome Perſons long and miſerably troubled with this Diſeaſe, ſometimes for a long time, one while every night, another while every other night with good ſucceſs.

3. The Preſervatory Indication, having place only in the Intervals of the Fits, endeavours the removal of the preſent Procatarxis of the Diſeaſe, and the hindring of a future: ſo that the Invaſions of Pains may return ſeldom or never afterwards. In order to theſe things, the Blood and nervous Liquour ought to be purified and kept in a due Craſis, that they do not engender a morbifick Matter, and the Brain and nervous Plexus's of the Abdomen to be ſtrengthned, that they do not receive it too readily. For theſe ends a way of dyet being ordered, Spring and Fall let ſolemn Courſes of Phyſick, ſuch as we have preſcribed for the Prophylaxis of the Gout, be entred upon.

Let

Let Vomiting, if it agrees, never be omitted in this Caſe; as by which the Emunctories of the Viſcera being emptied, they may more plentifully receive the Recrements of the Blood and nervous Liquour, which would otherwiſe encreaſe the morbifick Matter. And likewiſe that the nervous Plexus's and all the parts may be ſo ſhaken, that nothing which would turn to a Minera of the Diſeaſe may be permitted to ſtagnate or be heap'd together there.

Let purging for three or four times by due Intervals, alſo in a hot Conſtitution let blooding be uſed: Moreover, let altering Remedies, and chiefly Chalybeats, when the Perſon reſts from purging, be daily taken at phyſical Hours.

But above all other Medicines whatſoever, *Spaw-waters coming from Iron*, drank in the Summer time for a Month, are wont to give moſt relief: but when they are drank, diligent care muſt be taken that they paſs off well and quick by Urine or Seige; leaſt happily if they ſtay long in the Body, by taking to the Head or Feet, they cauſe the Vertigo or Gout, (as it frequently comes to paſs.)

Take our Tincture of Steel an ounce, give from fifteen drops to twenty twice a day in ſeven ſpoonfuls of the following Julep.

Take water of the Leaves of Aron, of the great bur-dock of each half a pound, of magiſtral Water of Earth-worms, of Gentian compound and of Pæony compound of each two ounces, Sugar half an ounce, mix them.

After the ſame manner, *Tincture of Antimony and of Amber*, nay, and many other altering Remedies, above preſcribed for Cephalick Affects, alſo in the Preſervation from the Colick, in regard its Procatarxis proceeds from the Brain, have juſtly place here.

Being ſometime ſince entreated to take care of the Health of a Reverend Old Man, who had been very ſorely obnoxious to the Colick for many years, I uſed the Method and Remedies which are now deſcribed: by the careful uſe of which, after a Month or two, he was better, and within a Year and a half he ſeemed perfectly cured, that afterward he lived wholly free from fits of Pains: But the Colick Diſpoſition had not long ceas'd, and he omitted the uſual courſe of Phyſick, but about the Throat, in the Muſcles ſerving for Deglutition, he had a Reſolution which frequently troubled him, that oftentimes by Aliments, and eſpecially Liquids there ſticking, he incurr'd the Danger of Suffocation: Receiving help againſt this evil by Antiparalitick Remedies, for the ſix or ſeven Years following he enjoyed an indifferent Health, and at laſt, as he was travelling, being then firſt ſeized with an Apoplexy, he died: It is obvious enough in this caſe, that the Recrements of the Nervous Liquor, wont to be depos'd about the Nervous Plexus's of the Abdomen, firſt raiſed the Colick, afterward that the ſame being excluded from that part, and betaking themſelves to another ſeat, about the *Nervous Plexus's Ganglioformes of the Throat*, brought the Reſolution or ſhort Palſey of the Æſophagus, and at laſt, by reaſon of the

the ſame matter reſtagnating in too great a plenty in the *Meditullia* of the Brain, the mortal Speechleſſneſs enſued.

A certain cunning and ſubtle Lawyer, fifty years of Age, having been wont to be troubled for many years with a periodical Head-ach, a deadneſs of his Senſes, and a mighty heavineſs of his Head; About the midſt of the Summer, being mighty ill of the foreſaid Affects, upon the Application of Topick Remedies, on a ſudden found eaſe, but a little after he had a firſt ſeizure of a violent Colick; the Invaſion whereof was ſo fierce, that his ſtrength failing on a ſudden, he fell into frequent Faintings with a cold Sweat: which Fit nevertheleſs within twenty four Hours vaniſht by degrees, without any eruption of Flatus's or Purging. But from thence forward being obnoxious to this Diſeaſe, he had frequent acceſſes of it: all which (as I carefully obſerved) were preceded by a Pain of the Head, with a Vertigo, and a Stupor, ſo that he was wont to foretell hence that the Pains of the Colick were to follow ſoon after in a certain Fit, which continued for twelve dayes with a mighty fierceneſs, the diſeaſed himſelf obſerved and told me, that the affect of the Abdomen coming upon him, he had found no illneſs in his Head, but that as the colick Paſſion remitted preſently the Vertigo with the Head-ach returned: from which reciprocal Metaſtaſis of thoſe Symptoms from the Head to the Belly, and on the contrary, we may argue that the ſame morbifick matter abounding in the Ductus's of the Nerves, ſometimes falling downward, brought the Colick Paſſion, ſometimes reſtagnating above, cauſed thoſe Cephalick Affects.

Not long ſince, a renowned young Man, ſtudious, and uſing a ſedentary Life, began to complain of a great deadneſs and dulneſs of his Senſes, alſo of a heavineſs of his Head, and almoſt a continual Sleepineſs. Moreover, his Stomack was become ſo ſlow and dulled that it was wholly deſtitute of all appetite: whilſt a cure is ordered againſt this evil Diſpoſition by Remedies, which rouſe up the Spirits and ſhake off the burthen lying on them, the Perſon falls into a moſt violent Colick, to which he had never before been obnoxious, by which a violent and as it were piercing Pain, poſſeſt the middle of the Abdomen, the Navel being drawn inwards, and notwithſtanding the daily uſe of Remedies of all kiuds, it continued with a mighty Violence for three Weeks; ſo that during that while he could neither ſleep but by taking Narcoticks, nor receive any eaſe from his Pain, but by a very hot Fomentation. Certainly, in this caſe, it is obvious to any man to obſerve, that theſe Impurities of the nervous Liquor, gathered together to a certain fulneſs, were the immediate or conjunct cauſe of all the illneſs, which matter firſt ſubſiſting in the Head, cauſed the mighty dulneſs of the Brain, and the oppreſſion of the animal Function, and afterward being fallen by the conveyance of the Nerves into the Nervous Plexus's of the Abdomen, cauſed the violent and long continued Colick.

THE

THE PRACTISE OF PHYSICK, CONTAINED *In Dr.* Willis's *Tract of* Fevers.

CHAP. I.

The Anatomy of the Blood; its Resolution into five Principles: its Comparison with Wine and Milk.

A *Fever* is only *a fermentation, or an immoderate effervescence brought on the Blood and Spirits*; now that this feverish effervescence may be explicated as it ought, these three things are to be considered. First, what that Liquor is which Ferments, whether it be only the Blood, or other Humours besides. Secondly, of what principles, and of what proportion of the same that Liquor consists in its mixture. Thirdly, and lastly, with what kind of motion and turgescency of these Parts or Particles of which the Blood is compos'd, the Feverish effervescence is raised.

1. That the Blood boyles violently, and makes an effort in a Fever, it is evident enough, and we may Conjecture that that Juice with which the Brain and Nervous Parts are irrigated, is often also in the fault; for since this Liquor is carried by a constant motion and a certain circulation from the Blood into the *Genus Nervosum*, and thence by the Lymphick Vessels into the Blood, its probable, if by reason of a Taint contracted by the Blood, that Humour is deprav'd in its Crasis,

or

or is perverted from its regular motion, that thence the ſhivering and the pain, the convulſions, delirium, frenzy, and many other ſymptoms of the *Genus nervoſum*, uſual in Fevers, ariſe.

After the *Blood* and *Nervous juyce* there are two other Liquors which are to be conſidered, as being apt to ferment, viz. the *Chime* or *Nutritive juyce* alwayes coming to the Blood, and the *Serous Latex* perpetually parting from it; which, tho firſt and laſt are Liquors ſever'd from the Blood, and diſtinct from it, yet whilſt mixt with it, they ought to be lookt upon as Parts received into it, or belonging to its Accompliſhment: and as long as both theſe are circulated with the Blood in the Veſſels, they participate of the Effervescencies of the primogenious Cruor, and often begin the ſame on occaſion, or encreaſe them being begun.

2. As to the *Principles of which the maſs of Blood conſiſts* in its mixture, and what Proportion they have in it; We do not allow of the Opinion of the Ancients, That the Maſs of Blood conſiſts of the four Humours, viz Blood, Flegm, Choler, and Melancholy; and that, according to the Eminency of this or that Humour, the divers Temperaments are form'd, and that by reaſon of their fermentings or Exorbitances, in a manner, all Diſeaſes ariſe: nor has this Opinion been ſo generally uſed for ſolving the *Phænomena* of Diſeaſes, ſince the Circulation of the Blood, and its other Affects, before unknown, came to light: and ſince thoſe Humours conſiſt of other Principles, viz. Choler of Salt and Sulphur, with a mixture of Spirit and Water, and Melancholy of the ſame, with an addition of Earth; and ſince the Blood is immediately compoſed of theſe kind of Principles, and is wont to be ſenſibly reſolved into them, I have rather choſen, omitting the vulgar Acceptation of the Humours, to make uſe of theſe known Principles of the Chymiſts for explicating the nature and affects of the Blood: therefore there are in the Blood, as in all other Liquors apt to ferment, a great deal of Water and Spirit, a ſmall Proportion of Salt and Sulphur, and ſomewhat of Earth. I ſhall briefly run over theſe Principles, and endeavour to ſhew after what manner they conſtitute the Conſiſtency, Properties, and Affects of the Blood.

1. The *Spirits* (which without Diſpute have the firſt place) are the ſubtle, and moſt volatile part of the Blood: their Particles being always expanded, and endeavouring to fly away, exagitate the groſſer Corpuſcles of the reſt in which they are involv'd, and keep them always in a motion of Fermentation; by the Effervescence and even Expanſion of theſe in the Veſſels, the liquor of the Blood continually boyls, and the reſt of the Principles are kept in an orderly Motion, and in an exact Mixture: if any thing that is heterogeneous, or unapt for mixture, comes into the Maſs of Blood, preſently the Spirits, being troubled in their Motion, make an Effort, exagitate the Blood, and make

make it boyl vehemently, till that which is extraneous and immiſcible with it, be either ſubdued, or reduced, or driven forth.

2. From the Diſſolution of Sulphur in the Blood, it is likely that the ruddy Tincture of the Blood ariſes. For ſulphureous Bodies, above all others, give the higheſt ſaturated redneſs to a ſolving Menſtruum; and if at any time by reaſon of too much Crudity, the Sulphur is not diſſolv'd, the Blood becomes pale and Watery, that it ſcarce gives a redneſs to Linnen. The maſs of Blood impregnated with Sulphur together with Spirits, is very fermentative, and when the ſulphureous part is raiſed, and abounds too much in the Blood, it perverts its Craſis from its due ſtate, that thereby the Blood being deprav'd, or rendred bilous, does not rightly concoct the nutritive Juice, or being wholly inflamed, falls into heats and burnings, ſuch as ariſe in a continual Fever. For the Sulphur being too much exalted, and growing more turgid than it ought, raiſes mighty Efferveſcenſies in the Blood; and thoſe whoſe Blood is plentifully impregnated with Sulphur, are very obnoxious to Fevers: by reaſon of the Particles of this incocted in the Nutritive Juice, and thence applyed to the ſolid parts, Fatneſs, Softneſs and Tenderneſs happen to our Body.

3. We diſcover Salt in the Blood by the Taſte, which is there highly volatiz'd by circulation, and if at any time in the Blood, by reaſon of an ill digeſtion, the ſaline Particles are not duely exalted, but continue crude and for the greateſt part fixt, thereby the Blood becomes thick and unapt for circulation, ſo that obſtructions are engendred in the Viſcera and ſolid parts, and ſerous Crudities are every where heapt together: but if the Spirit being depreſs'd or fainting, the Salt is exalted too much, and comes to a flowing, an acetous and auſtere diſpoſition is brought on the Blood, ſuch as is obſerv'd in ſcorbutical Perſons, and in ſuch as are troubled with a quartan Ague: alſo from the Salt by this means variouſly coagulated, the Gout, Kings-evil, the Nephritis, the Leproſie, and a great many Cronick Diſeaſes ariſe. When the Salt is exalted in a due meaſure, the ſaline Particles reſtrain the wild efforts of the Spirits, and eſpecially of the Sulphur; wherefore thoſe who have the Blood well ſaturated with a volatile Salt, are leaſt ſubject to Fevers, and ſo alſo thoſe who are often let Blood, are more apt to Fevers.

4. By the earthy Particles in the Blood, its too great volatiliſation is ſtay'd, and its over quick accenſion is hindred: Moreover, from the terreſtrial Particles of the Blood and nutritive Juice, the bulk and increaſe happens to the Body.

5. On the watery part of the Blood its fluidity depends, for hereby its ſtagnation is hindred and the Blood is circulated in the Veins without growing thick; alſo its too great conflagration and aduſtion is qualified, and its heat is allayed.

What we have ſaid even now concerning the Principles of the Blood, and the Affects to be drawn from thence, will appear more clear, if we conſider a little the Blood according to its ſenſible Particles; and compare it with the Liquours which are frequently in uſe among us. Now thoſe Liquours which have the greateſt Analogy with the Blood are Wine and Milk; as to its wayes of Fermentation and Effervescence, it is moſt aptly compar'd to Wine; as to its Conſiſtency, Coagulation, and Separation of the parts from each other, it is compar'd to Milk.

Firſt therefore we may obſerve concerning Wine, that as long as it is included in a Veſſel, its ſubtle and ſpirituous Parts continually exagitate and refringe the more groſs, and render them apt for an exact mixture; that which is heterogeneous and unapt to be ſubdued, is ſever'd by effervescence: mean while the depurated Liquour gently fermenting, is in perpetual motion, whereby all the parts expand themſelves every way, and paſs by a conſtant circumgiration from the top to the bottom, and again from the bottom to the top; by the particular fretting and refraction a great many effluvia's of Attoms part from the Liquour, which if they are kept in by a Veſſel cloſe ſtopt, the Liquour ferments too much, and often makes the Veſſel flye in pieces. So the Blood within the Veins is preſt on by a conſtant circulation: the vital Spirit ſubtiliſes, refringes, and preſently ſubdues the groſſer Particles: drives forth that which is heterogeneous and immiſcible: mean while from the refraction, and working of the Parts and Corpuſcles, the Effluvia of heat conſtantly flow forth, and evaporate by the Pores: upon the cloſing of which, if tranſpiration be hindred, preſently by reaſon of the too great effervescence of the Blood a Fever is kindled.

Secondly, we obſerve concerning Wines, that they grow turgid if any thing that is extraneous and of a fermentative Nature be mixt with them: nay, that ſometimes they are troubled more than uſually of their own accord: for when by a long digeſtion the ſulphureous part of the Wine is exalted too much, it falls into an effervescence greater than it ought, and (unleſs it be preſently appeas'd) it perverts the craſis of the Liquour by its Turgeſcency; the ſame thing altogether ſeems to be in the feveriſh Effervescence rais'd in the Blood, which is wont to be introduc'd for thoſe kinds of cauſes.

The third obſervation, or compariſon of the Blood with Wine is this: Wines (as many other Liquours) have their times of Crudity, Maturation, and decay, the ſame thing being to be obſerv'd in the Blood. [concerning which ſee Dr. *Willis* at large.]

So far of the compariſon of the Blood with wine, what follows, its ſimilitude with Milk conſiſts in the diverſity of its parts and their parting from each other, which is chiefly ſeen in it when it is let out of the Veins, and grows cold in a Veſſel. For when the heat and vital Spirit, which preſerve all in a mixture, are fled away, the remaining parts

parts depart from each other, and there is made a ſeparation of the thin from the thick, of the Serum from the fibrous Blood, *&c.*

After having conſidered the Blood, we may obſerve, that the nutritive Juice, ſupply'd from the Blood, and ſever'd from its maſs for the nutrition of the ſolid parts, ſometimes by reaſon of its depravation and irregular motion cauſes many ſymptoms in Fevers: This nutritive Juice which is ſupply'd from the maſs of Blood, by a certain circulation, after it has paſt the nervous parts, what remains of it being effæte and Poor as it were, is ſent again by the Lymphick Veſſels to the Blood.

CHAP. II.

Of the Motion and Effervescencies of the Blood.

WE muſt next enquire concerning the *Blood's motion* both natural (*viz.* by the help of what ferments; and by what ſort of turgeſcency of the parts, it is circulated in a continual motion through the Veſſels) and preternatural, viz. for what cauſes, and by the efforts of what parts, ſometimes it boyles above meaſure in its Veſſels, and falls into feveriſh Effervescencies.

Concerning the natural Motion of the Blood, we do not here enquire concerning its circulation: viz. by what kind of ſtructure of the Heart and Veſſels, as it were in a Water Engine, it is carried round in a conſtant courſe, but concerning its Fermentation, viz. by what kind of mixture of the Parts, and their mutual Action on each other (like Wine fermenting in a Veſſel) it continually boyles: and this kind of motion depends both on the *Heterogeneity of the parts of the Blood it ſelf*, and on the *various ferments*, which are inſpir'd into the maſs of Blood from the Viſcera.

As to the firſt, thoſe things which have altogether the like Particles, do not ferment, wherefore neither diſtill'd Waters, chymical Oyles, Spirits of Wine, or other ſimple Liquours are ſtir'd at all, but the Blood, conſiſting of various Elements of a contrary nature, and working on each other continually, ferments, and has all its Particles in a perpetual Motion.

It is an Argument that Ferments are requir'd for Sanguification, becauſe, when they fail by nature, they are ſupply'd by Art with good ſucceſs: for fixt Salts, Alchalies, Extracts, Digeſtives, and eſpecially Chalybeat Remedies give help only in this reſpect, that they re-

ſtore a new the ebullition of the Blood either weak or almoſt extinct.

As to what concerns natural Ferments, certainly many may be form'd and ſtor'd up in divers Parts, or Viſcera: for *any Humour in which the Particles of Salt, Sulphur, or Spirit, being very much exalted, are contain'd, indues the nature of a Ferment:* After that manner *Yeſt* and *Leaven* come to be ſuch, with which new Beer, and a maſs of Bread are excellently fermented: In like manner, an acetous Humour in the Stomack, participating of an exalted Salt, helps there Concoction: and in the Spleen, the Dreggs of the Blood, by reaſon of the Salt and Earth exalted in them, turn to a ferment.

How great a Vigour comes to the Blood from the Womb and genital Parts, appears hence, becauſe from the Privation or Diſcraſie of theſe in Virgins a Green-ſickneſs, in Men a want of Beard, a weak Voice, and an amiſſion of Virility follow, but the cheif ferment which ſerves for Sanguification is lodged in the Heart; for here is the greateſt ſeat of heat, in which the more crude Particles of the Chyme are kindled as it were, and acquire a volatility.

Therefore the Motion and heat in the Blood, depend chiefly on two things, viz. partly on its proper Craſis and Conſtitution, whereby being plentifully compos'd of the active Principles of Spirit, Salt, and Sulphur, it grows turgid of its own accord in its Veſſels (as Wine in a Hogs-head) and partly on the ferment implanted in the Heart, which very much rarifies the Liquour, paſſing through its Sinus's, and forces it to ſpring forth with a frothy Effervescency.

Let thus much ſuffize concerning the natural Motion, Heat, and Fermentation of the Blood, in the even tenour of which the ſtate of our Health conſiſts: to ſpeak now of its preternatural, or over great Effervescency, on which the Types, and Fits of Fevers depend. I call an over-great or preternatural Fermentation, when the Blood (like a Pot boyling over the Fire) boyles above meaſure, and being rarified with a frothy Turgeſcency, ſwells the Veſſels, raiſes a quick Pulſe, and, like a ſulphureous Liquour taking fire, diffuſes on all ſides a burning heat.

This kind of Motion or Fermentation of the Blood is excellently illuſtrated by the example of fermenting Wines: for Wines, beſides the gentle and even fermentation, whereby they are firſt depurated, at certain times boyl ſo mightily, that they work over the Veſſels: and if they are cloſe ſtopt, they make them flye in pieces; after this manner, being put upon an effort as it were, unleſs they are preſently drawn off from the Tartar, or their Lees into another veſſel, they ceaſe not to boyl, till the Spirit, being very much ſpent, and the Sulphur or Salt too much exalted, they either become over-fretted, or degenerate into Vinegar.

Such an Effervescency is wont to be raiſed chiefly for two Cauſes; firſt, when any thing extraneous and immiſcible is put into the Veſſel:

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(so some drops of Tallow or of Fat dropt into the vessel, produce this Motion) or secondly, when Wines having too much Lees or Tartar (by reason of the sulphureous parts exalted above measure) fall into an Effervescence of their own accord, and boyl vehemently: for in whatsoever substance Sulphur abounds, and its Particles being loosned from their mixture, joyn with one another, and are kept close together, there such immoderate Effervescencies are procur'd.

After the like (tho not wholly the same) manner as Wines ferment, the Ebullition of the Blood is caused, viz. either some extraneous and heterogeneous thing is mixt with the Blood, which, in regard it is not assimilated, is wont to cause a perturbation and Effervescence, till the heterogeneous thing be either subdued, or sent forth, and the confused and troubled Particles of the Blood, are clear'd again, and take to their former position and site in mixture. Or secondly, the Blood is troubled above measure, because some Principle or Element which composes it, (viz. the Spirit or Sulphur) is rais'd beyond the natural Temper, and becomes exorbitant, whereby the Particles of this, or that not agreeing with the rest, are loosned from their mixture, being loos'd make an effort more then they ought; exagitate the Liquour of the Blood, and cause an effervescence, which is not appeas'd, till the Blood, being inflam'd as it were, has burnt a long time with a feverish blast. But there is this difference betwixt these two boylings of the Blood, that the Effervescence which depends on the mixture of an extraneous thing with the Blood, is for the most part short, or comming by Fits; which when the heterogeneous thing is separated or subdued, ceases of its own accord, and the troubled and disordered parts of the Blood readily return to their natural Site or Crasis: but the Ebullition which arises from the disordering of the exorbitant Spirit or Sulphur, is continual: to wit, here the whole mass of Blood is so open'd, and loosn'd from the strict bond of mixture, that taking a fire like an oily Liquour, it does not cease to rage and flame till the Particles of the Spirit or Sulphur, or of the combustible matter are for the greatest part consum'd.

There remains yet a third preternatural way of effervescency, in which the Blood undergoes an alteration, which does not happen to Wine, but very frequently to Milk: *viz.* sometimes a coagulation of that liquor is induc'd by a morbifick cause, so that its substance is fus'd, and separates into parts, and there is a secretion made of that which is thick and earthy from the thin; by reason of which the Blood is not meetly circulated in the Vessels, but its congeal'd portions, being apt to be fix'd in the extreme Parts, or to stagnate in the Heart, interrupt its even motion, and greatly hinder it. For restoring of which, effervescencies greater than usual are rais'd in the Blood; to wit, such as every where occur in the *Pleurisie*, *Plague*, *Small Pox*, and malignant Diseases.

CHAP

CHAP. III.

Of Intermitting Fevers.

A Fever may be deſcrib'd after this manner, That it is a *diſorderly motion of the Blood, and its over great boyling, with a heat and thirſt, and other ſymptoms beſides, with which the natural œconomy is variouſly troubled.* As we obſerv'd before concerning the effervescence of the Blood, ſo we may now concerning the Fever, that its acceſs is either ſhort, and coming by fits; which therefore is called intermittent: or great, and drawn in length, which is call'd a continual Fever: We ſhall ſpeak firſt of the intermittent.

Concerning this Fever, we ſhall firſt enquire in general what kind of effervescence of the Blood it is which cauſes its Fit, and whence it is rais'd. Secondly, Wherefore the Fit conſiſts of a coldneſs, with a ſhivering, and a ſweat enſuing. Thirdly, What is the cauſe of the intermiſſion, and of the ſet times of return. Fourthly and laſtly, we ſhall ſubjoyn certain irregularities of Intermittent Fevers.

As to the firſt, We muſt ſuppoſe, that for an Intermittent Fever, ſome heterogeneous thing is mix'd with the Blood, whoſe Particles, in regard they are not aſſimilated, make ſo long an ebullition of the ſame, till either being ſubdued, they are rendred miſcible, or being ſubtilis'd, they are ſent forth: wherefore, ſuch matter being ſubdued or ſent forth, the fit ceaſes; and when this matter ſprings a freſh, it cauſes a new Ebullition, and conſequently a new Fit happens.

Now that which cauſes an exactly periodical Effervescence of the Blood, muſt of neceſſity be ſome thing which againſt each of the ſet returns or acceſſes of the Fever is engendred in our Body in a ſet meaſure, and alwayes in an even proportion, and is communicated to the maſs of Blood: wherewith, when the Blood is ſaturated to a fulneſs, preſently it grows turgid, and falls into an Effervescence: now whatſoever others may think, I judge this thing to be the nutritive Juice, ſupplyed from the matter of things eaten and convey'd to the Blood in weight and meaſure, which, in regard it is not aſſimilated through defect of Sanguification, being heap'd together to a fulneſs in the Veſſels, it cauſes a Turgeſcency in the Blood for its expulſion.

I have obſerved before a three-fold State concerning the Particles of the Blood, viz. of Crudity, Maturity and Decay, that is to ſay, the nutritive Juice ſupplyed from the daily Food, comes crude, being mixt with the Blood, and circulated for ſome time, it is aſſimilated, and maturated into a perfect humour; afterward waxing ſtale, it runs into parts,

parts, and is ſeparated, while the Blood is continually renewed after this even manner, and its loſſes are repair'd, it ferments quietly, and is circulated within the Veſſels without tumult or immoderate Effervescence; but if the ſupply of the nutritive Juice be not maturated as before, nor turns into Blood by a perfect digeſtion; its Particles mixt with the Blood, continue in its maſs as ſome heterogeneous thing, and not exactly agreeing; with which, when it is ſaturated to a fulneſs, preſently the Blood grows turgid, and falls into a feveriſh Effervescence, whereby the freſh ſupply of this depraved Juice is either ſubdued or ſent forth.

If it be askt for what cauſe the nutritive Juice, being mixt with the Blood, is not aſſimilated, but degenerates into a heterogeneous and fermentative matter: I judge that this is done for the moſt part, not through the fault of the Aliments, or of the Viſcera, but of the Blood it ſelf. For the Blood, even as Wines, ſometimes falls from its native and genuine Diſpoſition, into a ſharp, acid, or auſtere nature, and becauſe the Blood ſanguifies, it happens that when that is fallen from its due temper, it eaſily perverts the ſtore of nutritive Juice, wherewith it ought to be repaired.

Secondly, as to the ſhivering and cold preceding the heat in this affect, doubtleſs the true and genuine cauſe of thoſe is the flowing and turgeſcencie of the nervous Juice degenerated into a nitrous Matter, wherewith the Spirits and heat being charged, are obunded, and the nervous Bodies being irritated are put into a Trembling: but afterward when theſe nitrous Particles, being in part protruded to the Superficies of the Body, the Blood is ſomewhat freed from their cumbrance and oppreſſion, the animal ſpirits recollect and begin to diſplay themſelves, and then a moſt intenſe heat enſues, becauſe both the maſs of Blood being opened by reaſon of its Effervescence with the febrile matter, and its mixture being looſned, the ſulphureous Particles are freely kindled in the Heart: and becauſe (the Pores of the Skin being poſſeſt by the ſame matter protruded toward the circumference of the Body) the vapory Effluvia are inwardly reſtrained, which much exagitate and heat the Blood: and which heat continues ſtill in it till the fermentative Matter being wholly burnt, and fully ſubdued and ſubtiliz'd together with the aduſt Recrements remaining after the Deflagration, and joyning with the Serum, they evaporate by Sweat or inſenſible Tranſpiration.

Thirdly, from what is ſaid it will be eaſy to ſhew the Cauſes of the Intermiſſion, and of the Set Returns, *viz.* the Intermiſſion follows, becauſe the Morbifick Matter is all clear'd at one fit, and ſo till a new be brought in place, an intermiſſion follows of neceſſity. Now a new matter begins to be engendred from the time that the laſt Fit ceas'd, and when the Blood is filled again to a Turgeſcency, it boyles and comes to a flowing.

As to the Set Returns of the Fits, these happen, because for the most part the nutritive Juice is supplied from the Viscera to the Blood passing in the Veins in an even measure and quantity, tho sometimes, if the Persons who have intermittent Fevers gorge themselves too much, or are very abstemious, the Fits happen sooner or later than usual.

If it be ask'd, wherefore the Set Returns of Fevers are not of one kind, and of the same distance, but that some come every day, some every third or fourth day; the cause is the different constitution of the Blood, whereby it is perverted from its due temper into a sharp, sometimes an acid, or austere disposition. According to this differing Dyscrasy, the nutritive Juice, fresh brought, falls more or less from its maturation, and is perverted into a matter sooner or later apt to Ferment.

The Procatarctick Causes of this Disease plainly shew its Origine from the temper of the Blood being chang'd. For intermitting Fevers are chiefly rife in that Season, and those places, in which the Blood receives the greatest alteration from the Air.

The same thing is made out by the Cure of intermittent Fevers, whether it be natural and critical; or artificial, and be perform'd by the help of Medicines: As to the first, Intermittent Fevers are wont to be terminated after a two-fold manner: the first is, when the temper of the Blood is altered by the Fits themselves, and it is brought to its natural state; the other way is, when the change of the Air or Place of abode brings a mighty alteration of the Blood, for so Fevers begun about the *Equinoxes*, are terminated about the *Solstices*; also the Diseas'd travelling into another Country often recover.

As to the Cure to be perform'd with Medicines, it is undertaken either *Empirically* or *Dogmatically*; and in this Disease *Empyrical Remedies*, taken from Mountebanks or old Women, are more esteem'd, and often effect more than the Prescripts of Physicians given according to an exact method of Curing.

The *Empyrical* Remedies which are said to cure intermittent Fevers, are such as without any evacuation keep off the invading Fit: and are either taken inwardly, or are outwardly apply'd where the Pulses chiefly beat, *viz.* they are bound for the most part to the Region of the Heart, or to the Hand-wrists, or to the Soles of the Feet: now it is worthy to be enquired into, after what manner these work, and by what means they stop the feverish accesses. It is manifest in the first place, that the vertue and action of these things which are outwardly applyed, are communicated to the Blood and Spirits immediately; and in regard they drive off the Fit by way of prevention without the evacuation of any humour or matter, of necessity the reason of this effect must consist only in this, that by the use of these kinds of Medicines the Turgescency and Fermentation of the Blood with

with the Febrile matter are ſtopt, that is to ſay, from the Medicine bound about the Veſſels, certain Corpuſcles or Effluvia are communicated to the Blood, which greatly fix, and conſtringe its Particles, or alſo by fuſing and exagitating precipitate them as it were: after both wayes the ſpontaneous Effervescence of the Blood is hindred: like as when cold Water is put into a boyling Pot; or as when Vinegar or Allum is put into new and working Beer, preſently the fermentation ceaſes, and the Liquour acquires a new taſt and conſiſtency, and is as fit for drinking as if it had been ripened a long time. Now that theſe Febrifuges operate after this manner, it ſeems plain enough, becauſe thoſe that are of chiefeſt note excell in a ſtyptick and aſtringent, or alſo in a precipitating Virtue: hence *Sea-ſalt*, *Nitre*, *Sal Gemm*, the *Juice of Plantain*, *Shepherds pouch*, all *aſtringent Herbs bruiſed with Vinegar*, and the like things bound to the Wriſts; the roots of *Tarrow*, *Tormentill*, alſo *Camphire* hung about the Neck, are ſaid to remove this Diſeaſe: Moreover the things that are taken inwardly are of the like ſort, the Juice of *Plantain*, *red Roſe-water*, *Allum*, in as much as they fix and conſtringe the Blood; a *Decoction of Pepper*, *Sal Armoniack*, or of *Wormwood*, *Spirit of Vitriol*, alſo a ſudden Paſſion of Anger or Fear, in as much as by fuſing and exagitating the Blood, they precipitate it, often hinder the feveriſh acceſs: like as a concuſſion and exagitation of any Liquour, or an infuſion of aſtringent things in it hinder a ſpontaneous Effervescence or Effort. It is uſual with ſome Empiricks for the cure of intermittent Fevers, to make a hard Ball of Flax or Paper rowled up, and to bind it ſo cloſe to the Wriſt where the Pulſes beat, that the circulation of the Blood in that place is in ſome manner ſtopt, and by this means the invading fit of the Fever is driven away. I have certainly known many cured after this manner of a long continued Diſeaſe: the reaſon of which ſeems to be, that whilſt the Blood is ſtayed in its Motion in any part, it ſtirrs more violently in the reſt, and ſo from that trouble raiſed in the whole Blood, the ſpontaneous Effervescence of its Liquour, which was to follow a while after, is ſtopt: and upon the Fits being put off twice or thrice, Nature takes to the digeſtion of the matter, and to its ancient regularity.

The dogmatical cure for the moſt part is undertaken by *Vomits* and *Cathartick*s, alſo by *letting Blood*: with which the Diſeaſed are miſerably tormented, and the Diſeaſe is ſeldom brought to an end, tho ſometimes Tertian Fevers are taken away by a Vomit given a little before the Fit, which happens, becauſe by this means the Blood is pretty fully cleanſed of its bilous Humour: tho its worthy obſervation that Vomits do no good in a Quartan Ague, and ſeldom in a Tertian, unleſs they are given preſently at the beginning, when the febrile Diſpoſition is yet light, and not fully confirmed.

Concerning intermitting Fevers in general, there remain yet to be explained certain irregularities of them, in which they alter from the common way: first therefore, the fits are wont sometimes to be without cold or shivering: an intermittent Fever was rife this Autumn, whose accesses troubled the diseased only with heat, and that very intense, in many there was a violent vomiting, but no cold or sweat; after four or five returns had hapned, as the fit invaded, the diseased were wont to be a little chill'd, and afterward plainly to have the cold fit, and, as it went off, to sweat: the reason of this was, because by the hot summer the Constitution of the Blood was become sharp and very much burnt: wherefore the Particles of the crude Juice mixt with it were presently scorcht and burnt, that they did not wax cold first, with a sourness (like new beer) and then afterward burn out: but a Turgescency being raised, the whole (like dry Wood laid on the fire) presently burnt out in a light flame; but afterward, the Liquour of the Blood, after having burnt for some fits, became less torrified; that the depraved nutritive Juice was not presently scorcht, but passed into a nitrous Matter, and fermenting with a sourness; which first growing turgid, brought a sence of coldness on the whole Body.

There remains yet a great doubt concerning the distances of the returns, which sometimes seem to be double in the same Fever, that the first access answers to the third, and both happily in the Morning: and again, the second to the fourth, and both happen in the Evening, and so on: wherefore such a Fever is wont to be called *a double tertian or quartan:* It seems to me, that in this case sometimes it happens that the Fever is simple, and of one kind, and that the Types are alike, and all agreeing with each other; but that the errour chiefly arises, because the intervals of the returns are not computed by hours, but by dayes: for since the intervals of the beginnings of the Fits are not distant from each twenty four hours exactly, but either sixteen or thirty hours in a quotidian, and in a tertian not forty eight hours, but forty or fifty six, more or less, or thereabout, it will come to pass that the alternate fits will happen before, and the rest after noon: to which also may be added, that the uneven way of living which the diseased use, may oftentimes produce great unevennesses of the returns, that sometimes the fit comes twice a day, as I have often observed in cachectical Persons, and such as have used a disorderly dyet: nevertheless it often happens that intermittent Fevers have returns of fits which neither observe the same distance, nor keep wholly to the same sort of form: I have frequently noted in a quartan Fever, that besides the set accesses, returning about the same hour, the fourth day, certain erring and uncertain fits troubled the Diseased, that sometimes, the day preceeding the wonted fit, sometimes following it, another fit also (tho slight) was raised anew, carrying exactly the Type of an intermittent Fever, with a shivering, a heat and sweat: and nevertheless

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the primary acceſs returned at the uſual time: this for the moſt part is wont to happen either by a diet ill ordered, eſpecially by ſurfeiting and drinking of Wine, or by the ill adminiſtration of Phyſick: the reaſon of which, I take it, conſiſts in this, that by theſe errours in diet more matter is heapt together, than can be clear'd off at one fit.

CHAP. IV.

Of the kinds of intermittent Fevers, and firſt, of a Tertian.

WE call *a Tertian Fever*, not that which happens at three days diſtance; but incluſively from the day in which one fit begins, on the third thence, another returns: mean while, ſometimes if the fits are long, viz. protracted to twenty four hours, and withall come before the uſual time of their acceſſes, the ſpace of intermiſſion is often leſs then twenty four hours.

The eſſence of a *Tertian Fever* conſiſts in this, that the Blood (like Beer made of over-dryed Malt) being too ſharp and burnt, does not ſoon ſubdue and ripen the nutritive Juice, which is brought into it crude, from things eaten, but perverts a great deal of it into a Nitro-ſulphureous matter, wherewith, when the maſs of Blood is saturated to a Turgeſcency, like new Beer put in Bottles, it falls a fermenting: from the flowing of that nitrous matter, which obtunds the heat and vital Spirits, and twitches the nervous Parts, firſt a cold is cauſed with a ſhivering: afterward, the vital Spirit prevailing again, this matter fermenting in the Blood, begins to be maſtered and to be kindled in the Heart, by the burning of which, an intenſe heat is diffus'd throughout the whole Body: afterward its relicks being ſevered, and mixing with the Serum, are ſent forth by ſweat.

This burnt diſpoſition of the Blood conſiſts in this, that it is impregnated more than it ought with Particles of *Salt* and *Sulphur*: Wherefore the *procatarctick Cauſes* which diſpoſe to this diſeaſe are a hot and bilous Temperament, Youth, a very hot Diet, as an immoderate uſe of Wine and peppered meats; but eſpecially the Vernal and Autumnal Seaſons of the Year; tho moſt commonly ſome *evident Cauſe* beſides is requir'd for putting this Diſpoſition in act, and we aſcribe the origine of this Diſeaſe to ſome notable accident: Wherefore a lying on the Ground, or taking cold after ſweating, or tranſpira-

tion any way hindred, alſo ſurfeiting or a troubling of the Stomack by diſorderly eating, and whatſoever things cauſe an immoderate effervescence of the Blood, bring into act the latent diſpoſition of this Diſeaſe: for on every ſuch occaſion the nutritive Juice heapt together in the Blood, and ſomewhat deprav'd, falls a flowing, and ſeparating from the reſt of the Blood, ferments it with a nitrous ſourneſs, afterward being kindled and exagitated with the vital Spirit and Heat, it brings the fit with a very intenſe burning.

A Tertian Fever is wont to be moſt common in the Spring, at which time the Blood is moſt vigorous and in beſt plight. A Fever hapning, if it continues not long, is commonly ſaid rather to be Phyſick, than a Diſeaſe, which in part is true, becauſe by this means the impurities of the Blood are conſumed, the obſtructions of the Viſcera are opened, and indeed the whole body is ventilated, ſo that it is wholly freed from any excrementitious matter, and from the ſeminaries of growing Diſeaſes: but if this Diſeaſe be drawn out in length, it is the cauſe of many Diſtempers, and of a long ſickneſs: for hereby the maſs of Blood is very much deprived of the vital Spirit; and (like Wine too much fermented) in ſome manner looſes its ſtrength, wherefore a *Jaundiſe*, *Scurvy*, or *Cachexia* follow upon this Fever, when it is long a curing: for by the frequent fits, the vital ſpirit very much evaporates, which in regard it is little reſtored by things eaten, the Blood becomes thereby watery, and almoſt without ſtrength: mean while, the Particles of the Salt and Sulphur are raiſed and exalted more, whence the Blood is made ſharp and ſalt; and ſo more unapt for Circulation and a Pneumatoſis.

Moreover this Diſeaſe, protracted in length, often changes its form, and from a Tertian, becomes either a quotidian, or ſometimes a quartan; and afterward, ſometimes it returns from both to a Tertian: the reaſon of this is, the various change of the Diſpoſition of the Blood; for when from being ſharp and bilous, as it is in a Tertian, it comes to be leſs ſharp, but more watery, and weaker in its Craſis, the increaſes of the fermentative matter are more quick, and the acceſſes return daily, but when it turns auſtere and pontick, the increaſes of the matter being more ſlow, the fit comes but on the fourth day.

Certain Symptoms are wont to happen upon a Tertian Fever, which are vulgarly accounted for the Criſes of this Diſeaſe; and in truth, ſometimes thoſe appearing, the affect either clearly ceaſes, or begins to remit of its wonted fierceneſs: thoſe Symptoms are chiefly theſe three, *viz. a breaking forth of the Lips*, *a Jaundiſe*, and a *Phlegmon* ſuddenly raiſed in any part of the Body; tho I have ſometimes obſerved, that notwithſtanding ſuch breaking forth of the Lips, the Fever has continued obſtinate for a long time. wherefore I think it muſt be ſaid, that that eruption of Pimples denotes only a fuller Diaphoreſis in the whole, whereby the groſs, as well as the ſubtle recrements of

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that aduſt Blood, evaporate forth; for I have known in ſome, that in a Tertian Fever puſhes have broke out all over their Body, as tho they had the ſmall Pox; and if by this free ventilation, as by a purging, the Blood is ſo freed, that it recovers its ancient Craſis, the Fever is come to a Criſis; but if (as it ſometimes happens) ſome recrements, tho the more groſs, break forth, and others remain within, and ſtill foment the feveriſh Diſpoſition, thoſe ſores argue only a greater taint of the Blood, and an obſtinacy of the Diſeaſe: therefore it is to be obſerved, if upon ſore Lips the Fever does not remit, it will prove of long continuance and ſevere.

Sometimes a *Jaundiſe* happens upon a tertian Fever, and puts an end to it, the reaſon is, becauſe when the Blood has gotten a ſharp or bilous Diſpoſition, that thereby it perverts the nutritive Juice, and ſo heaps together an excrementitious matter, it is often freed from that Diſcraſy, when by a ſudden excretion the recrements of the aduſt Salt and Sulphur, are freely purged: the Gall-veſſels being irritated by a Medicine or ſpontaneouſly, and ſo plentifully clearing forth the Choer from the Blood, often perform this: for vomiting, purging, and eſpecially a Diarrhæa conduce very much to the cure of this Diſeaſe, nay ſometimes the Blood alone, exerting it ſelf of its own accord, throws off its bilous Recrements as its refuſe, and depoſes it in the Skin in circulating, and ſo the Jaundiſe cures the Fever.

When a *Phlegmon* (as it ſometimes is wont) happens upon this affect, it is commonly ſaid, that the Ague is fallen into the place ſwoll'n. Now it ſeems not ſtrange that the Diſeaſe is determined by ſuch an abſceſs: becauſe the Blood by this means continually ſevers from its body the ſtore of the degenerated nutritive Juice, and conveys it to the Part affected: wherefore a Belly continually looſe has freed ſome by degrees: becauſe by this means the Blood has preſently caſt forth its unprofitable Burthen, ſtill growing upon it, nor has allowed it a full increaſe: and ſometimes alſo, a deafneſs happning on a ſudden, the tertian Fever has preſently ceas'd, *viz.* by reaſon of the continual *Metaſtaſis* of the febrile matter from the maſs of Blood to the Head.

But if a tertian Fever neither declines by degrees of its own accord within a ſhort time, ſo as to ceaſe wholly within ſeven or ten returns, nor is brought to a Criſis by any of the ways above-mentioned, nor is remov'd by the help of Phyſick; but after ten or twelve fits continues ſtill ſorely to afflict the Diſeaſed, it will prove a very difficult thing to cure it: for the Blood, by the continual heaping together of the febrile Matter, and by its frequent being inflam'd, becomes at length ſo depraved, that it concocts nothing rightly for nouriſhing the Body and ſupporting its ſtrength: nor is it able wholly to ſhake off the impurities and Excrements from its maſs, that it may make a Criſis of the Diſeaſe; but the ſame daily prevailing, the Blood, beſides its dyſcraſie, begins to be ſomewhat injur'd in its mixture, wherefore the

the Fits return more frequently; nor does a perfect intermiſſion come between, but the Diſeaſed being very weak and faint, are in a manner always feveriſh, with a thirſt and heat. When the thing is brought to this paſs, unleſs Art affords a Remedy, or the change of the place of aboad, or the revolution of the Year bring relief, this Affect often is terminated in Death.

As to the *Cure*, the Method of healing commonly is directed to this only ſcope, *viz.* that the Minera of the Diſeaſe be extirpated, and that the febrile Matter be eradicated out of our Body without any remaining ſomes or fear of a Relapſe; wherefore we diligently inſiſt on Vomits and Purges, which, when they do little towards a Cure, but the ſtrength of the Diſeaſed is very much broken, they are left by the Phyſicians, and the whole buſineſs is committed to Nature. The Intentions (as it ſeems to me) ought to be theſe; Firſt, the reſtoring of the Blood to its natural temper, Secondly, the prevention (as much as may be) of the depravation of the nutritive Juyce. Thirdly, the ſtopping of the feveriſh fermentation for keeping off the Fit. And theſe Indications have place not only in a Tertian Fever, but in every intermittent Fever beſides: which nevertheleſs are not to be perform'd by the ſame wayes or Remedies, but by one ſort and another, according to the diverſity of the Diſeaſe, the condition of the ſick, and the ſymptoms chiefly preſſing: howſoever, in the Cure of this Diſeaſe, there is more to be imputed to Nature, and to a well regulated form of Diet, than to Pharmacy.

1. Concerning the firſt *Intention*, *viz.* that the Blood may be reduc'd to its natural temper, *Vomits*, *bleeding*, and *purging* are of great Uſe; eſpecially if they are uſed in the beginning of the Diſeaſe. Vomits do good, inaſmuch as they purge the Stomach, that the firſt concoction may be better perform'd, and that thereby a purer nutritive Chyme may be ſupplied for the Matter of the Blood, and chiefly, inaſmuch as by forcing the Choler plentifully from the *meatus choledechus*, they empty the Gall-bladder, that thereby the Choler may be more copiouſly clear'd from the Blood, and ſo the Blood may be cleans'd from the recrements of the aduſt Sulphur and Salt. Opening a Vein cools and ventilates the Blood, that thereby it is leſs torrified or parch'd, and is circulated more freely in the Veſſels without danger of being burnt. Purging alſo draws plentifully the Choler from the Gall-veſſels, and conſequently from the maſs of Blood, and by irritating them, forces it forth. For this end, (*viz.* the reducement of the Blood, *Digeſtives* conduce, being ſharp qualifiers, inaſmuch as they fuſe and alter the Blood, and allay its fervour. Sometimes alſo the change of the place of abode, and of the Air, egregiouſly corrects the evil conſtitution of the Blood above any other Remedies.

The ſecond *Intention* is excellently perform'd by a Diet, and an exact form of Food, which in this Diſeaſe ought to be thin and ſpare:

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wherefore Hunger is commonly ſaid to be the beſt Remedy of this Diſeaſe; and we find by common Experience, that by a ſpare feeding the feveriſh acceſs is moſt commonly put off beyond its uſual time. There are two things chiefly to be obſerv'd concerning Dyet; firſt, that the Aliments be thin, let nothing be given ſulphureous or ſpirituous; for ſo the conflagration of the Blood is leſſened: then ſecondly, that when the Fit is a coming, or has ſeized, no Food be taken; wherefore in faſting Perſons the Fit is more mild and is ſooner over.

What was propos'd in the third place: a ſtopping of the feveriſh acceſs, is undertaken by Remedies which ſtop the fermentation of the Blood; and tho this Remedy be look'd upon by Phyſicians as Empyrical, Immethodical, and Deceitful, yet I have found by experience, that theſe Fevers have been oftentimes cured this way, when Medicines did nothing at all: tho you muſt obſerve, that the uſe of theſe after bleeding and purging (if there be need of them) will do moſt good, and unleſs theſe are duely premitted, thoſe others ſeldom ſtop the Fit: and Vomiting, Purging, and Blooding, unleſs they are uſed preſently and at the beginning, do little good, nay, are oftner wont to do hurt; wherefore if the Choler about the beginning be plentifully cleanſed forth, or the Blood be ventilated by breathing a Vein, it is reduced to its due Craſis; but afterward, in the progreſs of this Diſeaſe, (the Spirit being very much exhauſted, and the Salt and Sulphur being too much exalted) if theſe evacuations are us'd, they weaken the Craſis of the Blood more; and therefore it is found by obſervation, that a Tertian Fever is ſeldom or never cur'd, and often paſſes into a Quotidian, where theſe Medicines are us'd very late. I have known my ſelf in the Spring-time that certain Perſons enjoying a good entire health, have fallen preſently into a Tertian Fever, after having taken a Vomit for prevention-ſake, which cauſed a violent evacuation; and that others, who have been cur'd for ſome time of this Fever, have preſently undergone a relapſe upon taking a ſtrong Purge for carrying off the remainder of the febrile matter: it may readily be ſaid, that the Minera of the Diſeaſe lying quiet before, is rous'd up by this means by the Medicine, and brought into act; but if you conſider this thing rightly, it ſeems rather to be ſaid, that by a ſtrong Purge the Craſis of the Blood is very much injur'd, and whereas before it was prone to a bilous Diſcraſy, ſo that it aſſimilated with difficulty the nutritive Juyce, upon this evident cauſe it preſently degenerates more, and that it forthwith perverts the Nutriment into a fermentative matter, and ſo incurrs the feveriſh diſpoſition. An Opinion has vulgarly prevail'd, that a Tertian Fever can ſcarce be cured without a Vomit; wherefore ſome Medicaſters are wont, under the pretext of neceſſity, to give an Emetick Medicine to any Perſons whatſoever troubled with this Diſeaſe (tho weak and infirm) not without great

great danger of Life; and those whom they judge wholly unable to bear this Remedy, they leave to Nature, as not easily curable. But (as I am well satisfied by having often try'd the contrary) that this kind of Practise is ill founded: and I rather think that Vomits are seldom or never requir'd for the Cure of a Tertian Fever, unless it be in a robust Body, and readily inclin'd to vomit, and when it happens that the Stomach is loaded with an excrementitious matter; but instead of this, that a gentle Purge may be more properly us'd; for a Purge in this case does the same thing as a Vomit, to wit, it evacuates the Vessels containing the Choler, that this being plentifully exhausted from the blood, the feverish Dyscrasy may be corrected. Now when the Humour of the Gall, emptied in the Stomach, is drawn forth upward, a great offence is thereby brought on the Stomach, and a mighty perturbation is raised in the whole body: but if by a gentle Cathartick that Humour is allur'd downward, it is sent forth without any trouble. Moreover, if to a gentle Purge repeated once or twice, a very thin Diet, and without any meat, be added, it will often answer the Preservatory indication, that there will not be need of other Remedies for removing the cause of the Disease, but these things being duely premitted, let those things be used, which either inwardly taken or outwardly applyed stop the access of the Fever. By this plain and easie form of Physick, *viz.* by *purging with an infusion of Senna and Rhubarb, a thin diet, and a topical febrifuge applyed to the Breast or Wrists*, I have oftentimes known tertian Fevers cured in a short time, without the use of any other offensive Medicine. Nay, a thin diet alone, with Periapts seasonably applyed, has cur'd very successfully a Woman with Child, aged Persons, and such as were very weak, whose strength would not bear purging.

I have so frequently experienc'd the wished success of that method, that I do not doubt, but a tertian Fever, if it be mannag'd this way from the beginning, to wit, before the temper of the Blood be more injured by an ill form of diet, or by Physick ill administred, it will be cured as easily as any other Disease: for proof of this I shall give the following relation.

A certain noble Youth, of a cholerick Temperament, was seised with an intermittent tertian Fever; as the fit came on him he vomited very much yellow and greenish Choler, afterward for many hours he was sorely troubled with a most intense Heart-burning, a heat and a drought. The day of intermission, on which it was my chance to be present, eight ounces of Blood were drawn by my order from this Person, and in the Afternoon an emollient Clyster was injected: he used also, a very thin diet, (*viz.* only of Barly Meats) he took every Night going to rest this Opiate, *viz.* *Conserve of Roses vitriolated half a dram, Diascordium a scruple, and every Morning a Scruple of Salt of Worm-wood, in a spoonful of the Juice of Oranges*: but these things not succeeding (for the fit returned somewhat more remiss, but with a vi-

a violent vomiting as before) and likewiſe in regard this ſick Perſon greatly dreaded a Vomit (becauſe upon taking a very gentle Emetick not long before he had vomited about thirty times, even till being ſeiz'd with a Cramp and Convulſions, he was brought to a great failure of ſtrength with danger of Life) therefore, the day following the ſaid fit, I gave him a potion of the *infuſion of Senna, Rhubarb, and yellow Saunders with Salt of Wormwood in Fountain Water*, by which he purg'd ten times with relief: the next Morning, three hours before he expected the fit, I applyed *febrifuge Epithems* to his Wriſts, and blooded him again to ſix ounces, from which time he had no fit of his Fever, and afterward, being purg'd again after the ſame manner, he grew perfectly well.

But if a Tertian Fever, by reaſon of the evil conſtitution of the diſeaſed, or by reaſon of errours committed in diet, or Phyſick, has laid its roots deep, that after a long continued affect the fits ſtill grow worſe and worſe, and the diſeaſed mightily languiſh, their ſtrength being dejected, with a thirſt, and burning almoſt continual, a loſs of Appetite, Watchings, a weak Pulſe, a ruddy Urine, and very full of contents, ſomewhat a differing method of Cure ought to be ordered: in this caſe firſt it muſt be endeavour'd that the Diſcraſy of the Blood be removed: wherefore let the diſeaſed feed only on thin diet, as *Barly or Oat Meats, with the opening Roots boyled in them*, wholly forbearing Meat Broaths; let the Belly be kept ſoluble (if it be needful) by the uſe of *emollient Clyſters*; Moreover (Catharticks being omitted) it ſeems that we ought only to inſiſt on *digeſtive Medicines*, which fuſe the Blood, and gently lead forth the ſerous Impurities by Urine; and comforting Remedies, which ſtrengthen the Viſcera, and refreſh the Spirits: for this end *Apozemes of diuretick Herbs and Roots*, neatly prepared, alſo *Opiats of temperate Conſerves with Sal Nitre, or the fixt Salt of Herbs, and with teſtateous Powders, and Spirit of Vitriol mixt with them*, excellently conduce, when the Craſis of the Blood is ſomewhat amended, that the Urine is clearer and leſs colured, alſo the ſleep quieter, with an abatement of Thirſt and Heat; then Remedies may be profitably given for ſtopping the fit of the Fever: Wherefore let *febrifuge Epithems* be applyed to the Wriſts, and to the Soles of the Feet; alſo let the *Powder of the Peruvian Bark, or of its Succedaneum, or alſo of the Bark of an Aſh, of Tamariſk, or of Gentian, be given in White-wine with the mixture of Salts*: After that the acceſſes are taken away, and the diſeaſed begin to gather Strength, to have a Stomack, and in ſome meaſure to concoct what they take, gentle Purges will be of uſe, but let the diſeaſed ſtill abſtain from feeding on Fleſh or rich fare, and it is not to be doubted, but he will ſoon recover his perfect Health without violent purging or blooding.

CHAP. V.

Of the Intermittent Quotidian Fever or Ague.

NExt after a Tertian Fever, by reason of their Affinity and the likeness of the Fit, follows a *Quotidian*, *viz.* whose access is wont to return every day. It is the Opinion of some that this Fever is only a *double Tertian*, and that it arises from the matter being dispers't, and getting possession of a two-fold focus; to which nevertheless I do not agree, and I judge that its rise is to be attributed to a peculiar Discrasy of the Blood: in this the symptoms of Heat and Cold are more remiss; but the access holds longer, and is often wont to continue eighteen or twenty hours: this Fever for the most part follows upon a Tertian, for when the vital Spirit is much spent by a frequent Deflagration of the Blood, and (the feverish Disposition still remaining) the Blood is become weaker, it less concocts, or brings to perfection the nutritive Juice, and perverts it in a manner wholly into a fermentative matter: wherefore it is sooner brought to an increase, and is heapt together to a plenitude of Turgescency in half the time as before: but because the matter heapt together partakes as well of crudity as adustion, therefore the heat of the fermentation is more remiss and more uneven, and (like green Wood laid on the fire) it burns more slowly; wherefore the fit is of a longer continuance.

Sometimes it happens that a *Quotidian* Fever arises first without a foregoing Tertian, *viz.* when a feverish affect seises a Body that is cacochimical, and filled with evil Juices: for then the Blood, being poor in Spirits, perverts the nutritive Juice in a greater store, and heaps it together in a shorter time to a plenitude of Turgescency: and that which at first is a Quotidian often changes its Type, and becomes a Tertian: even as a Tertian often passes into a Quotidian, there being a great vicinity betwixt these Fevers, and their Causes; and a little change of the Constitution of the Blood makes a transition of the one into the other. An intermittent Quotidian Fever is not so easily cur'd as a Tertian: for whether that comes first simply, or follows upon another intermittent; however it is raised from a stronger cause, and argues a greater Discrasy of the Blood, which does not presently yield to Remedies: Moreover, this Fever if it be of Long continuance, or comes upon another Cronick Disease, besides the vice of the Blood, it has most commonly joyned with it infirmities of the Viscera: to wit, the Blood being vitiated, easily fastens its Impurities, heapt together by degrees on the Viscera, as it passes through their Involutions.

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(Hence in a quotidian Fever; a loading of the Ventricle, a tenſion of the Hypochondres, obſtructions, or Tumours ſometimes of the Liver, ſometimes of the Spleen, or of the Meſentery, are joyn'd) tho theſe kinds of Affects are not the cauſe of the Fever (as is vulgarly thought) but only its products. Wherefore in this Fever, beſides the ſimple Method of Cure which is indicated in a Tertian, many other Intents or Coindicants come in conſideration, viz. We muſt uſe all our Endeavours that the Ventricle be purged of its load of Humours, that the ſtuffings of the Viſcera be clear'd, that their Infirmities be ſtrengthned, and together with theſe, that the Diſcraſy of the Blood be amended, and the feveriſh acceſſes ſtopt, ſo that by reaſon of theſe various kinds of Intentions, we muſt proceed by a longer way to the Cure. In this caſe Vomits, (if the Strength will bear them) will be of uſe above the reſt; alſo Purges, with which the aſſiduous increaſe of the excrementitious Matter may be ſent forth, muſt be often repeated; beſides theſe, *digeſtive Remedies and deobſtruents* which reſtore the Ferments of the Viſcera and of the Blood, and correct their Diſcraſies are frequently to be uſed. Wherefore, *fixt Salts of Herbs*, their *extracts*, *the acid Spirits of Minerals*, and ſometimes *Preparations of Steel* do excellently well. Concerning theſe means there is a difficult task, ſince, becauſe of the manifold evils, many things are to be done together, whereas, by reaſon of the aſſiduity of the feveriſh fit, the Diſeaſed can uſe only a few. In affects thus complicated, tho the way of Method requires firſt a removal of Impediments, and then to cure the Diſeaſe, yet I have known this kind of Fever cured often without method, and empirically, in a cacochymical Body, attended with many other affects; to wit, after a light proviſion for the whole, febrifuge Remedies outwardly apply'd have firſt taken away the feveriſh acceſs, that afterward, time, and occaſions of curing, might be the better afforded for the other affects. I lately went to ſee a Lady of Quality, who having long had a cachectical habit of Body, and being weak and feeble, a month after Child-birth, was ſeized with an intermittent Quotidian; after ſix or ſeven acceſſes of which, her ſtrength was ſo caſt down, that ſhe was not able to riſe from her bed, or ſcarce to be rais'd up in it; nor could ſhe take ever ſo little food, tho very thin, but it caus'd great diſturbances in her Stomach: Moreover, the Region of the Stomach, and of the left hypochondre, was all beſet with a hard Tumour, and violently paining: By reaſon of the ſtrength being extremely caſt down, there was no place here for evacuation beſides the uſe of Clyſters; and the Stomach being mighty weak, refus'd all other Remedies, unleſs they were pleaſing, and in a ſmall quantity. In this difficult caſe, and pent up within narrow limits of Curing, I adviſ'd theſe few things, *viz.* that ſhe ſhould take twice a day this mixture; *viz.* *Magiſtral water of Earth-worms two ounces*, *Elixir Proprietatis*

prietatis ſix drops: moreover, I ordered a *fomentation* to be apply'd to the Stomach, of *the Leaves of Pontick Wormwood, Centory, Southernwood boyl'd in White-wine with the roots of Gentian, the Veſſel covered*; and that after the fomentation, a toaſt dipt in the ſame Liquor ſhould be worn on the Stomach; beſides, I had *febrifuge Epithems* bound to her Wriſts; and by theſe Remedies alone, on the third day ſhe miſt her Fit, and continued free from the ſame afterward, and then by the uſe of Chalibeat Remedies, ſhe grew perfectly well within a ſhort time.

CHAP. VI.

Of the Quartan Fever or Ague.

IN a *Quartan Fever*, the time for the return of the Fit is longer than in the reſt, it being extended to the fourth day incluſively; and it's wont to be of longer continuance, and more difficultly cured: for this Diſeaſe is protracted for many Months, and often Years, and ſeldom or ſcarce at all yields to Medicines.

The Fit for the moſt part begins with cold, and a ſhaking, which are followed with a pretty troubleſome heat, but more remiſs than in a Tertian, Sweat for the moſt part concludes the acceſs. If the Diſeaſe ſticks long, it brings the Scorbutick or hypochondriack affect, and involves men in an unhealthy habit of body.

The Cauſes which diſpoſe to this Diſeaſe are, firſt, the conſtitution of the Air, and of the Seaſon; for the time of Autumn is always proper for this affect, that you ſhall ſeldom obſerve a Quartan Fever to ariſe but about the Fall: alſo in certain places, eſpecially about the Sea-coaſt, this affect is wont to be endemious, ſeizing any that live there, or come thither as ſtrangers; for this alſo makes a declining age, alſo a melancholy temperament, and which, by reaſon of an ill form of Diet, is obnoxious to the hypochondriack affect; moreover, Fevers of another kind, that are of a long continuance, and Chronick Diſeaſes, often paſs into a Quartan Fever.

Theſe things being conſidered, it ſeems that it muſt be ſaid, that a Quartan Fever, even as other Intermittents, depends on the vitious diſpoſition of the Blood; for the nutritive Juyce, conveyed by degrees into the Veſſels, is perverted into a fermentative Matter, and the effervescency of this heapt together to a plenitude of turgeſcency, makes the Fit of a Quartan Fever. But ſince in this Fever there are

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ſome things peculiar from the reſt, we muſt enquire what ſort of dyſcraſie of the Blood there is in this Diſeaſe diſtinct from the reſt, and after what manner it raiſes the moſt obſervable Symptoms.

I ſay therefore, that in this Diſeaſe the Liquor of the Blood has paſs'd from its ſweet, ſpirituous, and balſamick nature, to be acid and ſomewhat auſtere, like Wine turning ſour. That is to ſay, there is a ſcarcity of Spirits, and the earthy or tartarous part (which conſiſts chiefly of Earth and Salt) is exalted too much, and being raiſed to a flowing, brings a ſourneſs to the maſs of Blood: the Blood degenerated after this manner from its native Diſpoſition, does not duely concoct, and aſſimilate to it ſelf the nutritive Juice, but perverts it into an extraneous matter, wherewith, when it is ſaturated to a fulneſs in the Veſſels, and the nervous parts are irrigated with the Juice thence ariſing, there follows a flowing, and as it were a ſpontaneous Effervescence of this Matter, whereby the feveriſh acceſs is wont to be cauſed with a ſhaking, and a heat, as in a Tertian.

In a Quartan Fever the returns have longer Intervals, becauſe the Diſcraſy of the Blood being toward an acid, and therefore leſs ſmart and hot, it perverts the nutritive Juice without a conteſt and tumult; wherefore ſomewhat of it is aſſimilated, and the depravation of the reſt does not recede ſo far from its natural ſtate as in a Tertian: and hence its heaping together to a plenitude is ſlower, and it riſes to a Turgeſency in about as much time again and a half as in a Tertian.

The reaſon why this Diſeaſe is of ſo difficult a cure, and ſo obſtinately infeſts the Diſeaſed, is the melancholy Conſtitution of the Blood, which is not eaſily removed, and yields ſcarce to any Medicines; for there being in it a ſcarcity and defect of Spirits, and the Salt and Tartar being too much exalted (as when Wines turn ſour) it is extream hard to reſtore it, and it is in a manner of the ſame labour and difficulty as to renew the vinous Spirit and Vigour in Vinegar; becauſe for reſtoring the Blood depraved after that manner, there is need that its whole maſs be volatiz'd, and that it ſpiritualiſes as it were anew. Wherefore in this caſe evacuatives do not the leaſt good, nay by depauperating the Blood more without remedying it, they often impair the Strength: but there is need of thoſe things which may exalt and volatiſe that which is fixt: and may promote a *Pneumatoſis* in the whole maſs of Blood: thence it is that in this diſeaſe the change of the Air and of the Soil moſt commonly give relief before any other Remedies whatſoever. For Quartan Fevers ariſing about Autumn are often cured by the following Spring, which doubtleſs happens becauſe the changed quality of the Air is wont to alter the evil habit of the Blood for the better: and for the ſame reaſon, the change alſo of the place of aboad moſt commonly cures this Affect when it will not yield to any Medicine.

The

The Autumnal Seaſon is moſt proper to produce this feveriſh habit of the Blood, becauſe when very much of Spirit and Sulphur has paſt away by the Summer heat, and that which remains begins to be preſt upon by the Cold, the Liquor of the Blood (as Wine turning ſour after too much Effervesence) eaſily degenerates into a pontick and ſharpiſh Nature: this alſo is procur'd by the Air of the Sea infecting the Blood with ſaline Vapours, which fix the Spirits. Moreover, the affinity of this Diſeaſe which the Scurvy and the Hypochondrial affect plainly ſhews that the evil Diſpoſition of the Blood is in fault, whereby it is become ſalt and earthy with a defect of a *Pneumatoſis*.

The laſt year, towards the end of the Summer, which had been very hot, an Epidemick Fever aroſe: then Autumn coming on, when that Diſeaſe ceaſed, a Quartan Fever began to be very rife, ſo that in many places well near the fourth part of man-kind was ſeis'd with the ſame, and thoſe of all Ages and Temperaments, which plainly ſhew'd that this affect did not take its riſe from a melancholy Humour heapt together through the fault of the Spleen, (as ſome have thought) but from the Diſcraſy of the Blood cauſed through the diſtemperature of the Year.

Tho many Phyſical Apparatus's were ordered againſt this evil, yet very few were cured within the compaſs of the Autumn: In ſome, about the firſt beginnings of their Sickneſs, before the Diſeaſe had taken root, Vomits gave relief: tho, in moſt, Medicines purging any ways, tho repeated a hundred times, did not the leaſt good at all: thoſe in whom the evil was deeply rooted, received not any relief from the moſt exactly deviſed Remedies uſed throughout the whole Autumn; when at this time I ſaw the vulgar Methods of Phyſick put in practiſe in vain. To a certain noble Virgin who deſired a ſudden Cure to be performed by any manner of means, I propos'd, that if ſhe would undergo a Salivation for ſome dayes by a *mineral Medicine*, ſhe might thence hope a ſpeedy conqueſt of her Diſeaſe: ſhe readily agreeing to this, I gave her a gentle and very ſafe Medicine, by which only a gentle ſpitting was raiſed, and that ended within twelve dayes; from the time the ſalivation began, ſhe preſently miſt her fits; but at the times they were wont to come ſhe found a diſturbance in her whole Body, with an oppreſſion of the Heart, and a danger of Fainting, but afterward, the ſpitting being ended, ſhe ſeem'd throughly recovered; and when after two Months time ſhe had again certain ſlight acceſſes of this Diſeaſe, an *Emetick Powder* being given her twice or thrice ſhe was perfectly cured without a relapſe.

After the Winter Solſtice this Diſeaſe was not ſo violent, but began to grow mild, in ſome, of its own own accord, and to be more eaſily overcome in moſt others by the uſe of Medicines, for at this time the diſcraſy of the Blood, contracted by the Summer heat, is wont to be removed by degrees by the cold of Winter, and the inveteraſcent maſs of

of the Blood to depoſe its old taint, and to return towards its natural ſtate: but thoſe who were of a melancholy Temperament, or had the Viſcera, and eſpecially the Spleen ill affected, or thoſe that uſed an ill form of diet, received no change from this Tropick, but held their Diſeaſe to the next period of the Year, to wit, to the Vernal Equinox, and then in a great many this affect was ſeen to be overcome, the Blood either being renewed of it ſelf, or its Diſtemperature being more eaſily amended by the uſe of Medicines; but in the mean time many aged, cachochymical, and otherwiſe weakly Perſons, died every where of this Diſeaſe, in this whole tract of time; and ſome there were, who having paſt the Summer Solſtice, had not yet ſhaken it off: now, tho many were troubled with this, as it were, Epidemious Fever almoſt for a whole Year, yet none that I knew of contracted it firſt in the Spring, and very few recovered of it during the Autumn, that I cannot doubt but the Diſcraſy of the Blood was really the cauſe of it, and that its cure conſiſted in its change.

The Remedies which oftentimes gave relief (at leaſt as far as it agreed with our obſervation) were ſuch as ſtopt the fit of the Fever: for the evil habit of the Blood being ſomewhat amended upon the change of the Seaſon of the Year, in caſe the habitual uſance of the fits be broken off, Nature recollects her ſelf, and eaſily recovers her ancient ſtate of Health by her own endeavour. And this kind of intent (viz. the ſtopping of the Fits) tho it be ſometimes performed by Vomits given a little before the acceſs (for theſe often ſtop the feveriſh Motion of the Blood, by raiſing another contrary to it) yet this indication is far more certainly, and indeed more ſucceſsfully performed by the uſe of thoſe kinds of Medicines, which do not at all evacuate from the Viſcera, but cauſe in the Blood a certain fixation, or precipitation of the feveriſh Matter for a time. Wherefore thoſe, whom I undertook to cure as the Spring came on, and thence forwards, I managed with this Method (and in many with good ſucceſs) a proviſion being made for the whole by a Medicine, ſometimes Vomiting, ſometimes Purging three hours before the fit, I was wont to order *Epithemes to be applyed to the Wriſts, and withal a febrifuge Powder to to be taken in Sack, and the diſeaſed to be kept in Bed in a gentle ſweat:* It ſeldom happen'd but at the firſt or ſecond time the acceſs of the Fever was ſtopt after this manner, and afterward the ſame Remedy being ſometimes repeated, at length the Diſeaſe wholly ceaſed: this kind of Practiſe (beſides what I have found by experience) ſeems to be made good by the uſe of the Powder of a certain *Bark* lately brought from the *Indies*; which is ſaid moſt certainly to cure this Diſeaſe, whereas the Virtue or operation of this, without any Evacuation, conſiſts only in this, that it ſtops the invading fits of Fevers.

Concern-

Concerning that *Peruvian Bark*, becauſe of late it begins to be in daily uſe, theſe few things which occur to common obſervation are to be ſaid, the vulgar way of giving it is to *infuſe two drams of this, being made into a Powder, in White-wine or Sack for two Hours, the Veſſel being cloſe covered*, and then as the fit approaches to let the Diſeaſed, lying in Bed, drink the Liquour with the Powder. This Drink often removes the imminent acceſs, tho many times that coming after its uſual manner, it prevents the next enſuing, howſoever, whether the fit be ſtopt at the firſt, or at the ſecond, or third time of return, and the Diſeaſe ſeem to be cured, yet it oftentimes is wont to return within twenty or thirty dayes: and then this Powder being given again, the Invaſion of the Diſeaſe is again put off for the ſpace of about the ſame time; and after this manner I have known many troubled with a Quartan, to have undergone only a few acceſſes of it during the whole Autumn and Winter, and ſo to have held the Enemy foreguarded till the Spring coming on, by the help of the Seaſon of the Year, and of other Medicines, the Diſpoſition of the Blood was altered for the better, and ſo that affect vaniſht by degrees: thoſe who by this means procured frequent times of truce, of the Quartan, being cheerful and ſprightly, liv'd prompt for all buſineſs, whereas otherwiſe being enervated and pale, they were brought to a Languour, and a vitious habit of Body: ſcarce one of a hundred tryed this Remedy without effect, nay, if it be taken in a half quantity, or leſs, viz. to the weight of *half a dram or a dram*, it oftentimes takes away the acceſſes, and ſuſpends the ſame only for a ſhorter ſpace, *nor is it matter whether it be taken in White-wine or Sack, but with reſpect to the Temperaments of the Diſeaſed*; for in a hot Temperament it may conveniently be taken in a diſtilled Water or Whey; alſo its clear infuſion, the thick ſubſtance thrown away, produces the like effect but of ſhorter continuance. *I have ordered this Powder to be given to ſome made into Pills with Mucilage of Tragacanth*, with the like benefit to the Diſeaſed; after what manner ſoever it be taken, it cauſes no manifeſt Evacuation, unleſs it be in ſuch as are apt to caſt, and loath all Phyſick, and it takes away the fit in a manner in all; nor is it only given with benefit in a Quartan Fever, but in other kinds of intermittents, viz. in all where there interceeds a time of ceſſation of the Fever: It is commonly ordered, that a gentle Purge be given before the uſe of this; but in ſome who have been very weak, and kept their Beds, this Powder taken alone without a previous Purge, has procur'd laudable effects: mean while I muſt ingeniouſly confeſs, that I have not yet ſeen an intermittent Fever throughly cured by once giving this Powder, nay, not only fits of a Quartan Fever, but of a Tertian and Quotidian, eaſie to be wholly overcome by other Remedies, ſeeming to be driven away with this, conſtantly returned after a ſhort time; for this reaſon thoſe, who, when there is no caſe of Neceſſity ſuppreſs intermittent

Fevers

Fevers only for a ſhort while by this Medicine, they being eaſie to be cured other wayes, ſeem to proceed deceitfully in Phyſick, nor more to the purpoſe, than thoſe who heal over a hollow Ulcer which will preſently break forth again: Indeed in ſome caſes the uſe of this may be proper enough, viz. when by the too great aſſiduity of fits, the ſtrength of the Diſeaſed is very much ſpent, times of truce may be procured by this means, whereby Nature may recollect her ſelf, and afterward more powerfully oppoſe her Enemy; alſo this Powder is conveniently given, that the Quartan Fever may be paſt over with leſs tediouſneſs during the Autumn and Winter. But thoſe who deſire to be long vacant from the Incurſions of that Fever, are adviſed to take this Powder in a great quantity and often, *viz. two drams for three fits one after the other, whether the accceſſes return or not*, by this means they continue free the longer, but ſtill keep the latent Enemy within them, tho laid aſleep.

If it be enquired concerning the nature of this Bark, and of its Vertue in ſuppreſſing the fits of intermittent Fevers, we muſt not diſſemble, but it is a difficult thing to explicate the cauſes of theſe kinds of Effects, and of the wayes of operating; becauſe we cannot find the like efficacy in any ſubject beſides: and a general rule is not well adapted to a ſingular experiment, however, by a diligent conferring the *Phænomena*, we ſhall make an orderly deduction of certain Poſitions, which if they do not attain the truth of this matter, at leaſt wiſe may make ſome ſtep towards it.

In the firſt place it may be obſerved, that this Medicine inwardly taken chiefly exerciſes its force and energy on the maſs of Blood: for it does not at all irritate the Viſcera, nor does it cauſe any exertion or trouble to them; Moreover, until its vertue be communicated to the Blood, its antipyretick force is not at all exerted, wherefore the fit immediately enſuing is not always prevented, but the ſecond or third after its being taken: and for this reaſon, that it may affect the Blood the ſooner, it is uſual, that together with the Powder a Liquour ſtrongly impregnated with the ſame be given, for ſo its Particles are more readily conveyed into the maſs of Blood.

Secondly, the vertue of that Bark conveyed into the Blood continues for ſome time in it, and that ſhorter or longer, according as a greater or leſſer portion of the Medicine is inwardly taken; for the Particles of this mixt with the Cruor, are circulated a long time with it, and the more there are of them, the more they affect its maſs, and produce a more laſting affect; for tho Aliments, and certain other things taken inwardly, in as much as they are preſently ſubdued by the natural heat, exert whatever force they have within a few hours, and then being aſſimilated or caſt forth, ceaſe to operate: yet ſome Medicines taken into the Body, becauſe they are not eaſily ſubdued, nor by a ſudden irritation are preſently ſent forth, continue very active

for many dayes, and keep the Blood and Juices a long time in this or that courſe of Fermentation; this may be obſerved of certain Medicines, alſo of Poyſons, and many Antidotes; whereof one only giving is wont to affect our Bodies for many daies, and the ſame repeated for a longer time: for it is uſual after Cathartick Medicines, if at any time they do not operate by Vomit or Seige, that Pimples and Puſhes break forth outwardly, after many Weeks. Moreover, if after Toxicum being drank Death be eſcap'd, every man knows that its virulency lurches for a very long time in the Blood and Juices. In like manner alſo this Powder, and haply a great many other things inwardly taken, continue ſtill to act on the Spirits and Humours how much ſoever they ſeem lulled a ſleep.

Thirdly, tho that Medicine acts immediately on the Blood and Humours, yet it does not throughly take away the feveriſh Diſcraſy ſeated in them, for as ſoon as its force is ſpent, and all its Particles are paſt off from the mixture of the Blood, the affect, ſuppreſſed only for a time, breaks forth anew, and takes to its acceſſes after its wonted manner: but for as much as nature during this time of ceſſation is become more ſtrong, therefore after the relaps, the fits are wont to return (not as before) but on the third or fourth day, according to the firſt Type of the Diſeaſe.

Fourthly, it is to be obſerved, that this Remedie does not ſtop the acceſſes of Fevers, as vulgar febrifuges, by fixing or alſo by ſuſing, the Blood; for then always the imminent fit, and not the ſecond, or third to follow after would be prevented.

Which things being conſidered, that we may ſubjoyn ſome things, as a Corallary, concerning the way of operating, whereby this Medicine ſeems to Work, we ſay, that its likely that when the Particles proceeding from the ſame taken inwardly, are mixt with the Blood, they force it into a certain new Fermentation, wherewith whilſt the Particles of the Blood are continually agitated, they are wholly hindred from heaping togeather an excrementitious matter, and from falling into feveriſh Turgeſcencies: for, as after the biting of a Mad-dog, or the ſtinging of venemous Animals, the Blood it ſelf, and nervous Juyce are long poyſon'd; yet Alexipharmicks taken hinder them from falling preſently into great Irregularities, by keeping their Liquours in another Fermentation, the uſe of which if ſo long continued, till the virulent Corpuſcles are wholly paſt away, no dreadful ſymptom is fear'd from that taint contracted; but if the ſtrength of the Remedie, given in too ſmall a quantity, be firſt ſpent, preſently the Poyſon ſprings forth anew, and the ancient venom which ſeemed to be driven away, is again brought into act: after the like manner, when the Blood having gotten a vitious habit perverts the nutritive Juyce, and for the better expelling it when heapt together to a fulneſs, falls into feveriſh Turgeſencies, that *Peruvian Bark* reduc'd

to

to a Powder, and given, by the commerce of its Particles ſo exagitates, and alters the Blood, tho affected with a Diſcraſy, by ſtirring a new fermentation, that it in ſome meaſure concocts the nutritive Juice, and continually evaporates its recrements, ſo that they are not heapt together for a matter of the fit, as before, but when the Particles of this Remedy are wholly exhal'd from the community with the Blood, and all the vertue is ſpent, the evil Diſpoſition of the Blood before contracted breaks forth again, and therefore the fits of the Fever return after their wonted manner: haply ſometimes it falls only that whilſt by the uſe of that Powder the acceſſes are ſuppreſt, that Diſcraſy of the Blood, by reaſon of the change of the Seaſon of the Year, or by help of ſome other Remedy, or of nature her ſelf, is amended by degrees, and ſo at length the Fever diſappears of its own accord: tho I have known this to have hapned but ſeldom, that you may expect the feveriſh fits to return in a manner with the like certainty, as they are ſuppreſt by that Powder.

As to the ſenſible qualities with which this Bark is endowed, it is manifeſt that it excells in a bitterneſs, with a certain ſtipticity, that by the taſte it is diſcovered to carry in a manner the like ſavour as is uſually found in moſt *Alexipharmicks*, ſuch as the *root of Gentian, Serpentary, Contrayerva, &c.* For things which are actually bitter are mighty powerful in ſuppreſſing the forces of preternatural Ferments: nay, and the Root of *Gentian*, which excellently reſembles this Bark, was formerly of famous uſe for curing quartan Fevers: and now, tho this *Peruvian Powder* be the only *Alexiterion* yet found for the quartan Fever, which ſtops the fits of it and of others (tho only for a time) yet it is not to be doubted, but there are other Medicines in nature, equally febrifuges; and it may be hop'd, that being led by the example of this new invention, we may be ſtirred up to ſearch into the Vertues of Herbs yet unknown to us: thus while we inſiſt on the tryal of Particulars, and joyn Empirical Phyſick with the Rational, it is not to be doubted but the Cures of the quartan and of other *Herculean Diſeaſes* will go on more proſperouſly: which I the more freely enſure for in this age, or at leaſtwiſe in the ſucceeding, becauſe being guided by the Analogy of that Bark, I my ſelf not long ſince, running through many things, lighted on a Medicine of no contemptible uſe for ſubduing Fevers: which alſo I give to all poor People, as a *Succedaneum*, with good ſucceſs.

CHAP. VII.

Of continual Fevers.

A *Continual Fever* is that whereof the acceſs is prolonged to many dayes without any ceſſation: it has its times of remiſſion and exacerbation, but none of intermiſſion; the burning ſometimes is more remiſs, ſometimes more intenſe, but the Diſeaſed are ſtill in a Fever, till the Diſeaſe be wholly ſolv'd by a Criſis, or an inſenſible recovery.

Now there are three degrees or manners of Efferveſcency by which the Species of continual Fevers are determined: from the ſubtle portion of the boyling Blood, or from the Ebullition of the Spirits ariſes the *Ephemera*, alſo the *Synocus* of one or many dayes: from the ſulphureous or oily part of the Blood too much heated and kindled, is raiſed the *putrid Fever*; thirdly, on a venemous Miaſm infecting the Blood, and congealing its Liquour, malignant Fevers depend: in each of theſe, from the depravation or rather corruption of the nutritive Juice, freſh heapt together in the Blood, various Paroxiſms, Inequalities, and critical Motions ariſe.

If it be askt after what manner the Efferveſcency of the Blood in a continual Fever differs from that other which makes intermittents; I ſay, that the Efferveſcence of the Blood in the latter depends only on the mingling of ſome fermentative Matter with the Blood, which will not duely mix with it, and on its heaping together to a plenitude of Turgeſcency: by reaſon of the Efferveſcency of this with the Blood in the Veſſels, and its deflagration in the Heart, the fit is cauſed, its diffliation is followed by an Apyrexia, ſo that in the intervals of the fits neither the Spirits nor the Sulphur make an effort, but the Liquour circulates evenly and without tumult in the Veſſels, the bond of mixture being entirely preſerved; on the contrary, in a continual Fever, the Diſorders of the Spirit or Sulphur, or of both of them together cauſe the ebullition of the Blood by their proper Efferveſcence, without the mixture of another thing: Wherefore, for a ceſſation of the burning heat, beſides the diffliation of the excrementitious matter, a deflagration of the kindled Blood, and its reduction to a due Craſis, are required.

The Conſtitution of the Blood in a continual Fever, is as that of Wines when they ferment by too rich Lees; that is to ſay, they are ſtrong with Spirit, and grow turgid with an exalted Sulphur, and therefore of their own accord without the mixture of another thing, they fall into a heat and boyl violently: In an intermittent Fever the Blood is ſtirr'd after

after such a Manner as Wines when they fall a fermenting by reason of something which is not missible being put into them: Moreover, in this Fever the Disposition of the Blood is like that of Wines, when in their declining state they become over fretted, ropy, or also sour; in which the Spirit is depress't, while the Salt or Sulphur, or both together, are above the rest, and affect the whole Liquour with their disorder: an intermittent Fever for the most part is without danger, because the parts that compose the Blood, tho they have changed a little their Crasis, however keep their bond of mixture; and whilst they are at liberty, circulate evenly in the Vessels; and pervert the nutritive Juice into a matter not altogether preternatural, but rather infesting with its Plenitude and Turgescency. In a continual Fever, besides the distemperature, the mixture of the Blood, and the texture of the Liquor are somewhat dissolv'd, that its corruption easily follows, wherefore this Disease is often terminated in death; and the nutritive Juyce is depraved to a matter wholly vitious, and altogether offensive to Nature.

CHAP. VIII.

Of the Ephemera Fever.

I Have said that the least degree of Effervescence which brings a continual Fever is placed in the subtle and spirituous Portion of the Blood, being too much agitated and heated: for this, like Spirit of wine, boyls on any light occasion, and gets a heat, being irritated either by too much Motion of the Body, or Perturbation of Mind; from an ambient heat, as that of the Sun, or of a Stove; by hot things inwardly taken, as drinking of Wine, eating of peppered Meats, and the like: for the Spirits of the Blood easily wax very hot of their own accord, and being violently moved, are not presently appeased, but exagitate, variously confound, and force to a rapid and disorderly Motion other Particles of the Blood: also by this Motion of the Spirits, the Sulphur, or the oily part of the Blood is more boyled, a little more dissolved, and somewhat more freely kindled in the Heart, whence an intense heat is raised in the whole Body, but for as much as the Sulphur is heated and inflamed only by minute Parts, and not throughout the whole, that fervour of the Spirits is soon allayed and ceases; Wherefore the Fever which is raised after this manner, is terminated for

for the moſt part within twenty four hours, and therefore is called an *Ephemera*. And if by reaſon of a greater heat of the ſpirituous Blood, it be prorogued longer, it ſeldom exceeds three dayes, and it is called an *Ephemera of many dayes*, or *a Synochus not putrid*: but if it happens to be extended beyond this time, this Fever readily paſſes into a putrid, to wit, from the long continued ebullition of the ſpirituous Blood, at length the groſſer Particles of the Sulphur fall a burning, and involve the whole maſs of Blood in this Effervescence.

An *Ephemera Fever* and a *ſimple Synochus* ſeldom begin without an *evident Cauſe*; beſides the things before-mentioned, immoderate Labour, Watchings, a ſudden Paſſion of the Mind, a conſtriction of the Pores, Surfeiting, alſo a Bubo or Wound, in Child-bearing Women an increaſe of milk are wont to bring theſe; the *procatarctick cauſes* which diſpoſe to them are, a hot temper of Body, an Athletick habit, a Sedentary Life, and a Diſuſe of Exerciſe.

The firſt beginnings of this Diſeaſe depend on the preſence of an Evident Cauſe; for either the Corpuſcles of an extraneous heat mixt with Blood, make it boyl like Water on the Fire. or a Fever is brought by motion, or by reaſon of Tranſpiration being letted, even as when Wines being heated, or ſtopt cloſe in a Veſſel, are ſet in a ſtrong working: after what manner ſoever the Inflammation be firſt rais'd, preſently the Spirits make an effort, and moving hither and thither, force the Blood to boyl, and to inlarge it ſelf in a greater ſpace, with a frothy rarefaction: wherefore the Veſſels are ſtretcht, and the membranous Parts are vellicated; hence a Pain, eſpecially in the Head and Loyns, a ſpontaneous laſſitude, and an inflation as it were of the whole Body enſue. But if with the Spirit of the Blood ſome ſulphury Part withall be ſomewhat kindled, a ſmart heat is diffus'd through the whole, the Pulſe becomes high and quick, the Urine ruddy; alſo Thirſt, Watchings, and many other offenſive Symptoms ariſe.

Concerning the Solution or Criſis of an *Ephemera Fever*, and of a *Synochus* not *putrid*, there are three things chiefly requiſite, *viz.* a removal of the evident Cauſe; ſecondly, a ſevering or diffiation of the depraved or excrementitious matter from the Maſs of Blood; thirdly, an appeaſing of the parts of the Blood, and their reſtitution to a natural and even motion and ſite. According as theſe things happen, ſometimes ſooner, ſometimes ſlower, and with more difficulty, this Diſeaſe is ended in a ſhorter or longer time.

1. The Evident Cauſe, which for the moſt part is extrinſecal, is eaſily remov'd, and Diſeaſed Perſons, as ſoon as ever they perceive themſelves injur'd by any thing, are wont to avoid the preſence of, or continuance with that thing: no Perſon being in a Fever upon drinking Wine, continues ſtill to drink it; when any Perſon grows more hot than

than uſual by the heat of a Bath or of the Sun, it is irkſome to him to continue in it longer.

2. As to the excrementitious matter which ought to be ſeparated and blown off from the Blood, this is either brought from without, as when by ſurfeiting, drinking of Wine, ſtanding in the Sun, or bathing in hot Water, the Blood is infected with hot and fermentative effluvia's or Corpuſcles, or that matter is ingendred inwardly, as when upon the deflagration of the Blood its Liquor is ſtuff't with aduſt Recrements or Particles; both theſe Matters muſt be ſeparated and blown off from the Blood, and be ſent forth either by Sweat, or inſenſible Tranſpiration, before the Fever is appeas'd: wherefore, when the Pores are clos'd, and Tranſpiration is hindred, the Ephemera Fever continues a longer time, and paſſes from a ſimple Synochus into a putrid Fever.

3. The Evident Cauſe being remov'd, and this degenerated Matter blown off, for a ceſſation of the burning heat there is required an appeaſing of the Parts of the Blood, and a reducement of them to order: for a rapid and diſorderly motion begun in the Blood is not preſently ſtopt, but ought to be allay'd by degrees: alſo the divers Particles of the Blood diſorder'd after this manner, and being driven this way and that, by reaſon of the feveriſh effervescence, do not preſently take to their former order of ſite and poſition, but it is neceſſary that they be extricated by degrees, and reſtored to their due mixture by little and little.

Tho this Diſeaſe, after the removal of the Evident Cauſe, ceaſes for the moſt part of its own accord, yet ſome Phyſical Remedies are advantageouſly applied to Uſe, eſpecially where there is danger leſt the Ephemera Fever paſſes into a putrid. The chief Intentions muſt be to allay the fervour of the Blood, and to procure a free Tranſpiration, to which chiefly conduce blooding, a very thin Diet, or rather abſtinence, cooling Drinks, a withdrawing the excrements of the Belly by Clyſters; but above the reſt, Sleep and Reſt do moſt good, which if wanting, they muſt be ſeaſonably procur'd by Opiats and Anodines.

A renowned young man, about twenty years of age, of an athletick habit of Body, by an immoderate drinking of ſtrong Wine fell into a feveriſh diſtemper, with a drought, heat, and a mighty trouble of the *Præcordia*; being blooded, he drank a vaſt quantity of fountain-water, and thereupon a copious ſweat preſently enſuing, he ſoon recovered.

An ingenious young man, of a ſedentary Life, and withall very much addicted to the ſtudy of Learning, when of late he had exercis'd himſelf above meaſure in the Summer Sun, began to complain of a Head-ach, a want of Appetite, a trouble of the *Præcordia*, and a feveriſh diſtemperature over the whole Body. To whom (in regard he loathed all Phyſick) I ordered a total Abſtinence, unleſs it were from

ſmall

ſmall Beer and Barley-meats: On the ſecond day, and again more on the third, the Symptoms remitted by little and little; at length, on the fourth, he became free from his Fever without any Medicine.

CHAP. IX.

Of the Putrid Fever.

A *Putrid Fever* is when the oily or ſulphureous part of the Blood, being too much heated, grows turgid above meaſure, and is brought as it were to flame; and therefore, from its likeneſs to humid things putrifying which contract a fervour, this kind of ebullition of the Blood, becauſe it cauſes an immoderate Heat, is called a *Putrid Fever*: Which name it ought properly enough to retain, becauſe in this Fever the Compoſition of the Blood (as it uſually happens in Liquors putrifying) is very much diſſolv'd; and ſo that its Principles are in a manner wholly ſevered from each other by the ferment of the Heart, and the active Particles being looſened from the mixture, break forth as it were into a flame. Wherefore the Liquor of the Blood being after this manner rarified, and as it were kindled in the Heart, is carried thence with a moſt rapid motion through the Veſſels, and with its deflagration ſends a great many effluvia's of heat from it; hence the whole maſs of Blood, (like water ſet on the fire) continually boyling, ſtretches the Veſſels, vellicates the Brain and nervous Parts, raiſes Cramps and Pains in them, very much conſumes the Vital Spirits by its effervescency, deſtroys the ferments of the Viſcera, hinders the functions of concoction and diſtribution, often depraves the nutritive Juice ſent into the *Genus Nervoſum*, that thereby very great diſorders of the animal Spirits enſue; nay, it perverts in a manner the whole œconomy of Nature.

The *Procatarctick Cauſes* which diſpoſe to this Diſeaſe, are, a hot and moiſt temperament, an Athletick habit of Body, Youth, the Spring or Summer ſeaſon, a plenteous and rich Feeding; moreover, an aſſiduous drinking of rich Wines, a ſedentary and idle Life, a Body cacochymical and filled with evil Juyces: but above the reſt, it is obſerved, that a frequent letting blood renders men apt to a Fever; wherefore it is commonly ſaid, that thoſe who have been let blood once, unleſs the ſame be done yearly, are prone to a Fever. The reaſon is, that by a frequent letting blood the Sulphur is more copiouſly heapt together within the maſs of Blood, the Salt in the mean while

while (which ought to moderate and keep it from growing exorbitant) being by this means withdrawn.

The *Evident Cauſes* which draw the latent diſpoſition of this Fever into act, are of the ſame kind as thoſe which bring an *Ephemera Fever*, and a *Synochus Simplex:* in this rank we place chiefly *perſpiration letted*, and *ſurfeiting*. By reaſon of the effluvia being reſtrain'd, the maſs of Blood, being increas'd in its bulk, grows turgid, and being inſpir'd anew with a certain ferment, as it were, falls a burning, and boyls violently; thereupon preſently the Pores are more obſtructed by the ſtuffing of the effluvia: and the texture of the Liquour being diſſolved, the particles of the abounding Sulphur in the Blood get free from the mixture, and are inflam'd by the fermentation of the Heart, as tho Fire were applied to them, and ſo they kindle a very intenſe Fever. And by *ſurfeiting*, both an immoderate fermentation is cauſed in the Blood, and alſo a nitro-ſulphureous matter fit for burning, and being enkindled, is conveyed as a fuel into the inflam'd Blood.

In this Fever four ſtates of time are to be obſerved, by which, as by ſo many Stages, its courſe is performed; and they are theſe, the *beginning*, the *Increaſe*, the *height*, and the *declining ſtate:* theſe are wont to be paſs'd over in ſome ſooner, in ſome ſlower, and in a longer time. The *beginning* ought to be computed from the time that the Blood begins to grow hot, and its Sulphur to fall a burning, till the burning Heats and inflammations are diffus'd throughout the whole maſs of Blood. The *increaſe* is, from the time that the Blood, being heated and kindled throughout, has burnt for ſome ſpace, and its maſs is loaded with Recrements, or aduſt Particles, which alſo increaſe the Fermentation. The *height* of the Diſeaſe is, when (after the Blood has burnt enough, and its inflammation is remitted) the long troubled Blood, as a noble Champion, its adverſary ſomewhat giving ground, recollecting all its Forces, endeavours a ſubduing and ſeparation of that aduſt matter wherewith it is ſaturated to a fulneſs, and a driving of it forth, a *Criſis* being attempted once or oftener. The *declining ſtate* follows after the *Criſis*, in which the Blood, the inflammation growing weak, becomes leſs hot, and either the vital Spirit ſtill prevailing, it ſubdues and purges forth by degrees what there is remaining of that aduſt and extraneous matter, till it be reſtored to its ancient vigour: or the ſame Spirit being too much depreſt, the Liquour of the Blood is ſtill tainted with aduſt Recrements, and therefore becomes troubled and depauperated; that it neither aſſimilates the nutritive Juyce, nor continues fit for Circulation, nor for accenſion in the Heart, for ſuſtaining the lamp of Life.

When therefore any one is ſeized with a *Putrid Fever*, for the moſt part a cold ſtiffneſs or a ſhivering accompanies the firſt invaſion, which is followed by a Heat which is unequal, and not as yet intenſe; be-

cauſe the Blood being yet full of crude Juyces, is kindled only by parts, and therefore it burns a little and then ceaſes, and then begins again, like a flame burning wet ſtraw: in this ſtate the Diſeaſe continues for ſome dayes, the Urine becomes more ruddy than uſual, by reaſon of the Salt and Sulphur more diſſolved, and incocted with the Serum: it retains ſtill its Hypoſtaſis, becauſe the coction and aſſimilation are not altogether depraved: it has a ſediment greater than it ought, which nevertheleſs is eaſily ſeparated, and ſubſides of its own accord: at this time you may let Blood, and give a Vomit or a Purge, ſo it be done without any great Perturbation of the Blood: It often happens upon the ſeaſonable adminiſtrations of theſe kinds of Evacuations, that the greater increaſes of the Diſeaſe are prevented, and that the Fever is killed as it were *in ovo*: the limits of this ſtage are variouſly determined according to the temperament of the Diſeaſed, and other accidents of the Diſeaſe. Sometimes within a day or two the firſt Rudiments of this Diſeaſe are laid; ſometimes the beginning of the Diſeaſe is extended to more, if it happens in a Body well in Fleſh, full of Spirit, and of a hot Blood and Juyce, in the time of Youth, and in a very hot Seaſon, in caſe the Diſpoſition to a Fever be great, and a ſtrong evident cauſe ſupervenes, the feveriſh Efferveſcence once begun, ſoon pervades the whole Blood, and on the ſecond or third day, the root being laid, the Diſeaſe ariſes to its increaſe: but if the feveriſh Indiſpoſition begins in a body that is not hot, a Phlegmatick or melancholy temperament, in old age, or in a cold Seaſon, it has a longer *Proœmium*, and ſcarce paſſes the limits of this firſt ſtage before the ſixth or ſeventh day.

The increaſe of this Diſeaſe is computed from the time that the burning of the Fever has got poſſeſſion of the whole maſs of Blood: that is, the Sulphur or the oily part of the Blood, being long heated, and boyling vehemently by parts, at length like Hay laid together wet, after a long incaleſcence, burſts forth all together into a flame: through the violent boyling of the Blood, at this time the Diſeaſed complain of an intollerable thirſt; Moreover, a head-ach, obſtinate watchings, often alſo Deliriums, a Phrenſy, and convulſive Motions moleſt them: they loath all Food, or caſt it forth by Vomit, or if happily it be retain'd, being parcht by the too much heat, it turns to a febrile matter: there is alſo a bitterneſs in the Mouth, an ungrateful ſavour, a roughneſs of the Tongue, a vehement and quick Pulſe, a Urine very ruddy, for the moſt part troubled, filled with contents, without an Hypoſtaſis or laudable ſediment: the Blood at this time being in a manner wholly kindled, it engenders by its deflagration a mighty quantity of aduſt matter, like the aſhes remaining after a Fire: whereby both the Serum, being mightily fill'd, yields a Urine that is thick and full of Contents: and the Blood being loaded with it to a Turgeſcency, is irritated into critical Motions, wherewith that febrile mater (if it may

may be) being ſubdued and ſeparated, may be ſent forth: and this brings the height of the Fever, in which judgment is given betwixt Nature and the Diſeaſe, the conteſt being brought as it were to a tryal, and therefore the evacuation which thereupon enſues is called a *Criſis*.

Therefore the height of a putrid Fever, is that time of the Diſeaſe, in which Nature attempts the expulſion of the aduſt matter remaining after the deflagration of the Blood: to this are requir'd firſt, that the Blood for the greateſt part has paſt burning, for in the midſt of it, Nature is not at leiſure for a Criſis, nor ever attempted it proſperouſly, nor is it procur'd by Art with good ſucceſs. Secondly, that the Spirit firſt in ſome manner ſubdue this aduſt matter of the Blood, and ſeparate it from that which is good, and render it fit for expulſion. Thirdly, that this matter be heapt together in ſo great a plenty, that by its Turgeſcency it irritates Nature to a critical Expulſion: when either of thoſe things is wanting, the Criſis for the moſt part is of no effect and not to be relied on, and ſeldom puts an end to the Diſeaſe.

A Criſis in a continual Fever is in a manner the ſame as the fit of intermittents; for as in theſe, when the maſs of Blood is ſaturated to a fulneſs of Turgeſcency with the Particles of the nutritive Juice depraved, and unfit for Maturation, there happens a flowing, ſecretion, and expulſion of that matter; ſo in a continual Fever, after the deflagration of the Blood and nutritive Juice, a great many Corpuſcles of aduſt matter are heapt together, with which the Blood being oppreſt, when it is a little free from burning, it ſubdues and ſeparates them by degrees, and then, a flowing being raiſed, endeavours to ſend them forth. Wherefore as the fits of intermittents do not happen but at a ſet time, and after ſo many hours, ſo alſo critical Motions happen from the fourth day to the fourth, or haply from the ſeventh to the ſeventh, for in ſuch a kind of ſpace the Blood burns off, and by its burning makes a heap of aduſt matter, as it were of Aſhes, which being offenſive to Nature, cauſes critical Motions by its irritation.

Therefore, as to what ſome ſay, that the Criſes depend altogether on the Influences of the Moon and Stars, and that they follow their Quartile, or oppoſite Aſpects, or their Conjunctions, it is not true: becauſe critical Evacuations are determined only by the heaping together and Turgeſcency of the aduſt matter, whoſe Particles, if they can eaſily be ſeparated from the Blood, and the Pores of the Skin are open enough, being involved in the Serum they are ſent forth by ſweat: and this is the beſt way of a Criſis, which if it ſucceeds well, it often at one bout puts a perfect end to the Diſeaſe, without fear of a relaps: to this next ſucceeds that criſis which is attempted by an hæmorrhagie, for this matter, as an Efflorescence ariſing with the Blood (if by reaſon of an unfree perſpiration it be not ſent forth by ſweat) it is conveyed into ſome part remote from the Heart, and is frequently ſent into the

Head by an impetuous ſally of the Blood, where, if there be an open paſſage from the Sinus's ſpreading into the Noſtrils, the morbifick matter ſprings forth together with a portion of the Blood: but otherwiſe often ſticking in the Brain, it brings a Delirium, Frenſy, or other ſore, and laſting Diſeaſes of the Head: *and it is to be obſerved, that in almoſt any continual Fevers, if at any time they come to an imperfect or difficult criſis, ſo that the Blood is corrupted for a long time with a feveriſh matter or aduſt Recrements: thereby the nervous Juyce (as it ſeems) comming to be tainted, obſtinate Affects, viz. Watchings, alſo Deliriums, Tremblings, Convulſive Motions, and long ſticking Weakneſſes of the nervous Parts follow.* There are other wayes of *Criſis's* in which Nature endeavours to expell the febrile matter, not at once and entirely, but by little and little, and by parts; ſometimes by Urine, ſometimes by Vomit, or Seige, ſometimes by Puſhes, or Buboes; which way ſoever it be done, that it may be with good ſucceſs, it is requir'd that the deflagration of the Blood preceeds it, and that the aduſt matter be concocted, and rendred apt for ſeparation.

Therefore the Height of the Diſeaſe is not one and ſimple, nor always happens after the ſame manner, but with a various diverſity of Symptoms, and with a tendency to events far differing: now a prudent Phyſician muſt give his Prognoſtick, in what ſpace of time the Diſeaſe will come to its height, and what event it will have.

If the Fever from the beginning be vehement, and on a ſudden pervades the whole maſs of Blood with a burning, if with the fierceneſs of Symptoms it preſſes in a conſtant and even manner without remiſſion, for the moſt part the Blood will ſo much burn off within four dayes, that the aduſt matter which is to make a Criſis, riſes by that time to a plenitude of Turgeſcency: but if the beginnings are ſlow, and the accenſion of the Blood be often interrupted, the Fever will come to its height about the ſeventh day: if it begins yet more remiſly, the height of the Diſeaſe is wont to be protracted to the eleventh or fourteenth: mean while it is to be noted, that as the fits of intermittent Fevers return at ſet times, ſo do critical Motions in ſuch as are continual, (and for the moſt part they obſerve the fourth day) for tho a perfect Criſis be prorogued to the fourteenth, or ſeventeenth, or haply to the twentieth day, becauſe all things requir'd to a full determination of the Diſeaſe do not concur: yet in the middle ſpace light motions happen, with which the febrile matter, riſing by degrees to an increaſe is a little emptied, and cut off as it were by parts, till Nature is able to ſet upon a more full diſcuſſion of it: and ſince upon the Blood's burning a mighty ſtore of aduſt matter is heapt together in the Veſſels within four dayes, Nature, unleſs it be otherwiſe diſturbed, every fourth day being provok'd with the ſtore of matter, endeavours to ſhake off a part of its burthen with a certain Turgeſcency: wherefore, for the

moſt

moſt part, on the fourth, ſeventh, eleventh, and fourteenth dayes, critical Motions happen, not through a direction of the Planets, but through a neceſſity of Nature.

As to the event, whether the Criſis will be good or no, certain fore-knowledges are taken from the Strength of the Diſeaſed, the Pulſe, Urine, and other ſigns, and the concourſe of Symptoms: if the burning of the Fever preſſing, the diſeaſed holds his ſtrength in ſome meaſure, has a ſtrong and even Pulſe, if the Urine be of a middle Conſiſtency, with ſome Hypoſtaſis, a Separation of Contents, and an eaſie ſubſiding, if the Diſeaſe makes its progreſs without violent Vomiting, Watchings, a Phrenſy, convulſive Motions, and the Suſpiſcion of Malignity, the height of it may be expected to be laudable, with a good Criſis: if the contrary to theſe things happen, *viz.* that the ſtrength be preſently caſt down, and the Diſeaſed be ſubject to a frequent Fainting, Convulſions, or a Delirium, with a weak intermittent or uneven Pulſe, if obſtinate Watchings, an intolerable Thirſt, and a Vomiting continually moleſt the Diſeaſed, if the Urine be thick and troubled, without an Hypoſtaſis or a ſubſiding of the parts, if whilſt the burning ſtill preſſes, Nature be ſtimilated to critical evacuations, the extremity or height of the Diſeaſe will be dangerous, nor is any good to be hop'd of the Criſis.

Concerning the Criſis of a *putrid Fever*, I ſhall here ſubjoyn a particular prognoſtick, in which, tho the things that appear at the beginning promiſe a wiſhed for event, a very ſad one is at hand: I have oftentimes obſerved in a *putrid Fever*, which begins ſlowly and with a ſmall burning, if the Urine be ruddy, and, when it is made, be preſently troubled, and opake, which is neither precipitated by the cold, nor depoſes a ſediment of its own accord, and if at the ſame time the Diſeaſed lye for many Nights without Sleep, tho they are quiet, and without toſſing, their ſtate is very dangerous; and there will be a greater ſuſpicion, if in the mean time they are not preſt with an intenſe Fever, nor with a Thirſt, and a Heat very troubleſome: for thoſe that are affected after this manner, about the height of the Diſeaſe, for the moſt part fall into Deliriums, convulſive Motions, and often into a Mania, from which they are in a ſhort time precipitated into Death, and when theſe Symptoms appear, the Urine is altered from being thick and ruddy, to be thin and pale, Melancholy Perſons are moſt obnoxious to theſe kinds of Fevers, to wit, in which the Exorbitancies of the Sulphur are little reſtrained by the Salt and earthy Dregs troubled together with it; and all which being raiſed by little and little break forth afterward with a greater deſtruction.

When the Diſeaſe is come to the height, either the thing is brought to a ſtreſs at one conflict, and thence forward there is a manifeſt tendency to Health with a Declination, or to Death: or there are frequent Bickerings

Bickerings betwixt Nature and the Diſeaſe, and critical Motions are often attempted before the Victory falls to either ſide.

As to the firſt, if with a good fore-running of Signs and Symptoms, after that the Blood has burnt enough, and its burning has remitted, the aduſt matter being evenly ſubdued and ſubtiliz'd, riſes with a full increaſe to a Motion of Turgeſcency, and Nature being free from any impediment or depreſſion, is of ſtrength ſufficient for a conflict, the feveriſh matter is exterminated for the moſt part at one motion of Efflorescence, and the Blood being become free from its Contagion and Fellowſhip, recovers in a ſhort time its ancient Vigour.

2. But if Nature be irritated to a critical Motion, before the Blood has perfectly burnt off, or that aduſt matter be prepar'd for excretion, tho, as to the reſt, affaires are in an indifferent ſtate, yet none but an imperfect Criſis follows hence, whereby ſomewhat of the Burthen, or Load wherewith the Blood is oppreſt is diminiſht; but in its ſtead preſently another ſprings afreſh from a new burning, and at ſet times afterward (haply in the ſpace of four or ſeven dayes) as the fits of intermittents, critical Motions return haply the ſecond or third time before that, the conflict being divided, the advantage plainly inclines to this or that ſide.

3. But when an ill *apparatus* of Signs and Symptoms preceeding, the burning of the Blood ſtill preſſing, without any concoction or ſubduing of the feveriſh Matter, a critical Motion is ſtirred up, Nature is ſometimes overthrown at the firſt conflict: nor does ſhe recover her ſelf again, but yielding her ſelf conquered by the Diſeaſe, is precipitated into Death: nor are things in much a better ſtate, when a Criſis at firſt being imperfect and of no effect, comes without any relief of the Diſeaſed, and afterward the next to this happens to be worſe, and then by another or haply another conflict the Diſeaſe prevails, till the ſtrength being wholly broken and proſtrated, there is no hope left of recovery. So much of the *height* or *Criſis* of the Diſeaſe.

By the Word *Declination* I underſtand the Condition of the Diſeaſed and of the Diſeaſe, which follows the height of it, whether it tends to a Recovery or to Death: whether the Fever, or the Life it ſelf of the Diſeaſed at this time declines.

As to the times of the *declining ſtate*, it will be neceſſary for us to enquire what the temper of the Blood is, and what alterations it undergoes, as often as a progreſs is made from a good *Criſis*, or an evil, to a Recovery, or Death.

The vice or depauperation which the Blood contracts from a feveriſh efferveſcence, conſiſts in theſe things; the Spirit very much evaporates and is loſt; the ſulphureous Part is too much ſcorcht, and is much ſpent by the deflagration, and after its burning, an aduſt matter is left, as a *caput mortuum*, with whoſe Particles the maſs of Blood

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is loaded and weak'ned, mean while the Saline and Earthy Parts are too much exalted; even as it is wont to happen in Wine or Beer too much fermented. The Blood being tainted after this manner, ill aſſimilates the ſtock of nutritive Juyce; nay, and not duely fermenting, or being inflam'd in the Heart by reaſon of the ſcorching, or defect of the Sulphur, it ill diſtributes the Vital Spirit; mean while, by reaſon of the aduſt Matter, and the Salt too much exalted, it boyls more than it ought, and deſtroys it ſelf more.

1. After a *good Criſis*, the Spirit, tho become weak, ſtill bears the ſway; wherefore it ſubdues by degrees, and expells what there is remaining of feveriſh matter, and concocts and aſſimilates the nutritive Juyce, (ſo a thin juyce be adminiſtred); whence the maſs of Blood is refreſh'd with a genuine Spirit and Sulphur.

2. After an *evil Criſis* the thing is otherwiſe, the Liquour of the Blood (like Wine too much fermented) wholly loſes its ſtrength; its Spirit is greatly diminiſht, what there is remaining of it for the moſt part is involv'd, and as it were overwhelm'd with Particles of aduſt matter: whence a continual Efferveſcence remains ſtill in the Blood, tho without coction, or aſſimilation of the nutritive Juyce, or a ſeparation of that which is uſeleſs from what is good: the benign Sulphur and Food of the vital Flame is much conſum'd, ſo that the Blood is kindled in the Heart leſs than it ought: mean while, through aduſt Recrements, and raiſed to too great a height with Salt and Earth, it continually boyles in the Veſſels, with a Drought and a Heat, and becauſe it is daily depauperated upon the continual ſpending of the benign Spirit and Sulphur, and is more tainted with the Salt and earthy Fæculencies too much exalted, its Liquour in a ſhort time grows vapid, and becomes unfit for circulation and accenſion in the Heart for upholding the vital Fire; wherefore Life muſt neceſſarily fail.

3. After an *imperfect* and *doubtful Criſis*, when the Diſeaſed being broken by a long continued Weakneſs, recover not but after a long time, the caſe ſtands thus: the Spirituous and Sulphureous parts of the Blood are very much conſum'd by their long burning; the remaining Liquour being not purg'd from the aduſt Recrements and Feculencies is rendred very impure; and there remaining ſtill ſomewhat of Oyle for the vital Flame, and the Spirits not ceaſing wholly from working upon the febrile Matter, the Blood is ſtill circulated, and (tho in a ſmall meaſure) is kindled in the Heart: nay, and the Spirits recover themſelves by little and little, and begin to ſet upon the matter remaining after the Fever, and at length wholly ſubdue it, and reſtore a ſprightly Fermentation *de Novo* in the Heart.

CHAP.

CHAP. IX.

Of the moſt obſervable Symptoms and Signs in a Putrid Fever.

THE accidents which a Phyſician ought chiefly to conſider in giving a true Diagnoſtick and Prognoſtick of this Diſeaſe, may be reduced to three *Claſſes*, as it were, or common Places; that is to ſay, they have regard to the Viſcera of Concoction, *viz.* the Ventricle and Inteſtines with their Appendixes; or ſecondly, to the Humours flowing in the Veſſels; to wit, the Blood in the Arteries and Veins, and the thin Liquor in the nervous Parts, together with the firſt ſources of both, *viz.* the Heart and Brain: or laſtly, thoſe Symptoms regard the habit of the Body, with the various conſtitution of the Pores, and the firmneſs or pining away of the ſolid Parts; thoſe who will exactly obſerve the courſe of the Diſeaſe, and aptly draw the Curative Intentions, muſt mind theſe three heads of Symptoms, and diligently obſerve what alterations happen in theſe diſtinct Regions, as it were, according to the differing times of the Fever.

1. Concerning the Ventricle and firſt Paſſages, in the whole courſe of this Fever, tedious affects and Diſorders; as a Nauſeouſneſs, a Vomiting, loſs of Appetite, Indigeſtion, a Diarrhœa, a roughneſs of the Tongue and Mouth, a bitter ſavour are wont to moleſt them; theſe things for the moſt part are attributed to the Humours, firſt heap'd together in the Stomach and there putrifying; but beſides that, the Recrements of the Chyle being burnt with too much heat, degenerate into an offenſive matter; often thoſe kinds of accidents happen, becauſe the off-ſcourings and filth of the Blood and nervous Juyce, whilſt they ferment, are carried inwards, and being depos'd within the Membranes of the Viſcera, cauſe Contractions, and make a filthy heap of a vitious and very infeſting Humour: I have often obſerv'd, that about the beginnings of Fevers, the Blood vehemently boyling, ſtill depos'd its recrements inwardly, to the benefit of the Diſeas'd, where, tho ſome tedious affects hapned about the firſt Paſſages, yet the effervescence was thereby more mild, the Pulſe moderate, and the Urine laudable; and after this manner thoſe that were ill of a Fever, with a thin Diet and the uſe of gentle carriers forth of Excrements, recovered in a ſhort time; but if in this caſe I gave a violent Cathartick for extirpating the Humours, that natural purging of the Blood being letted, preſently the Fever became intenſe, with a ruddy and troubled Urine,

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a high Pulſe, Watchings, and other horrid Symptoms; alſo often after the height of the Diſeaſe, the aduſt and excrementitious matter is ſever'd from the Blood, by this kind of inward luſtration, hence ſometimes a looſneſs, ſometimes cruſty breakings forth of the Mouth and Throat happen: wherefore concerning the accidents which happen in the firſt paſſages, there is need of caution, leſt while we obviate thoſe, we pervert the Motion of Nature: and leſt whilſt we fortifie theſe Parts againſt the incurſion of the morbific Matter, we perverſly keep the ſame ſhut up in the maſs of Blood.

The Symptoms chiefly to be conſidered in reference to the Maſs of Blood, are a heat diffus'd through the whole, a great trouble of the Præcordia, a ruddy Urine, a ſpontaneous Laſſitude, a Swooning, from which, being duely conſidered, theſe following things may become known: viz. what the degree of heat is, or according to what tenor the inflamed Blood burns, what times of remiſſion or exacerbation its efferveſcence obſerves whilſt it burns; whether it retains its Craſis, or its mixture entire: what ſtrength of the Heart ſuffiſes, and what ſpace the Veſſels afford for its burning, and the circulation of it, being kindled, in what ſtore the Blood, whilſt it boyles, heaps together aduſt Recrements, after what manner it ſubdues and ſevers them, or at leaſtwiſe endeavours to ſever them, in fine, what way of Criſis it endeavours, and with what ſucceſs.

The Accidents which regard the *thin Liquour*, with the Brain and the nervous Appendix, are diſorders about Sleep and Watching, a Weakneſs of the whole Body, a Trembling, a Tetanus, Pains, convulſive Motions, Contractions of the Viſcera, a Stupor, a Phrenſy, and the Obſervation of which will ſuggeſt to us, what is the Temper and Conſtitution of that thin Liquour; after what manner it irrigates and influences the Nervous parts, and circulates through them; how the animal Spirits perform the Functions of the Viſcera; what is the ſtate of the Brain; whether it continues free from the incurſion of the feveriſh matter: whether it be not in danger of being overwhelm'd by reaſon of its critical Metaſtaſis.

Concerning the Habit of the Body, we muſt conſider the manner of its Perſpiration, and the degree of it, whether it be only by vapory Effluvia, or by Sweat, or alſo by Puſhes; whether the fleſh falls on a ſudden from its wonted bulk, or whether it retains it a long time? what is the colour of the Face, and the Vigour, or dulneſs of the Eyes? from theſe things being duly compared together, we excellently meaſure the Courſe of the Fever, at what time it will come to the height, whether Nature will prevail over the Diſeaſe or not? with what way of Excretion, and with what ſucceſs it endeavours the expulſion of the febrile matter, by theſe ſigns alſo we are taught by what degrees the Blood fermenting, and often being coagulated, tends towards a Putrefaction, or Corruption: whether it any wayes concocts

the nutritive Juyce mixt with it; or whether or no it does not forthwith caſt forth its whole ſtore by Sweat, as it often happens in the declining ſtate of this Diſeaſe.

From the foreſaid Symptoms and Signs a fuller inſtruction yet is had; if it be firſt known, on what cauſes each kind of them depends, and in what orderly courſe they are wont to be raiſed in our Body. Wherefore I have thought it expedient, particularly to ſet down the chief of theſe, and to explicate the Reaſons of them, and their ways of coming to paſs: Now in a *putrid Synochus*, or continual Fever, the Symptoms chiefly to be obſerved are, a heat in the whole Body, a ſpontaneous Laſſitude, a great trouble of the Præcordia, an intolerable Thirſt, a burning and roughneſs of the Tongue and Jaws, a pain of the Head and Loyns, obſtinate Watchings, a Phrenſy, convulſive Motions, a Swooning, a Cardialgia, a Vomiting, Nauſeouſneſs, loſs of Appetite, a Looſneſs, a Dyſentery, with which, not all of them together, but ſometimes theſe, ſometimes the others, this Diſeaſe is wont to be attended: Amongſt the ſigns, the Pulſe and Urine give the greateſt light. I ſhall obſerve a few things concerning each.

1. The heat, which is perceiv'd in the whole Body to be ſharp and piercing, depends on the too great Effervescence of the Blood, and its accenſion in the Heart: for the Sulphureous or Oily part of the Blood, being exalted and falling a burning, is kindled at leaſt in a double portion more than its wont in the Heart: When the Sulphur is not duely diſſolved in the Blood, and kindled in the Heart, as in the longing Diſeaſe of Maids, the Leucophlegmatia, *&c.* The heat fails in the whole.

2. A *ſpontaneous Laſſitude* is felt in the whole Body, to wit, by reaſon of the Veſſels being extended with the boyling Blood, alſo the muſcular Fleſh is much ſtuft with Blood, and a copious Vapour, ſo that it is not fit for Motion: as thoſe who are troubled with an Anaſarca have their Limbs leſs free, by reaſon of the Redundancy of the ſerous Humour: Moreover in Fevers, by reaſon of the inflammation of the Blood, the Juyce, which is ſupplyed to the *genus Nervoſum*, falls from its due Temper, ſo that it is leſs fit for actuating Bodies.

3. The great trouble of the Præcordia happens, by reaſon of the Blood being copiouſly kindled in the Focus of the Heart, which boyles thence with a great inflammation into the Lungs; wherefore the nearer this Region is to that Focus of heat, by ſo much it is affected with a greater burning.

4. The almoſt unexſtinguiſhable Thirſt is cauſed both by reaſon of the growing inflammation in the Præcordia, and by reaſon of the ſharp and hot Particles of the febrile matter fixt in the Ventricle by the Blood in circulating; which require to be waſht off even as ſalt and pepper'd Food eaten in a plenty, or as ſharp things kept ſometime in the Mouth or Throat: for this kind of affect ſuggeſts a free taking in of Drink, as a Member too hot does a pouring of cold Water on it.

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5. The burning and roughneſs of the Tongue and Throat, and often alſo the growing of a certain white, yellow, or black Lee upon it, doubtleſs happen by reaſon of the Heat and Fumes breathing from the Ventricle and Lungs ſtrongly burning; and the Tongue grows white as often as that Moiſture (wherewith it is naturally much imbued) grows dry, the Saliva then growing too thick and viſcous: but if it happens that the Tongue be inwardly fill'd, or outwardly ting'd with a bilous Humour (as it comes to paſs in Vomitings of Choler) then its Villi, in regard they are ſpongeous, imbibing the yellow matter, preſent alſo a like Colour: and if the Heat becomes ſo intenſe that it burns the Blood, and kindles a Fire more ardent than uſual, it follows, that Fumes are raiſed from the Focus of the Heart, through the breathing Pipes of the Lungs, they ſcarce ſufficing for ventilating ſo great a Blaſt; which coming to the Roof of the Palate, ſtrike the Tongue as it were by Reverberation, and tinge it with a blackneſs.

6. Sometimes in Fevers (and eſpecially about the time of their declining) it happens, that the Tongue, Palate, Gums, nay, the Cavity of the whole Mouth and Throat, are covered with a *Viſcous Matter*, reſembling ſome whitiſh Cruſt; which being often cleans'd, preſently a new ſucceeds; and unleſs by diligently rubbing and waſhing the Mouth, this cruſty Matter be frequently clear'd, the Diſeas'd often incur danger of Suffocation: that kind of Affect very often happens to Infants newly born; for they are wont, for the moſt part, within fourteen days by an outward Efflorescence, to be bedeck'd with large and red Spots all their Skin over; and if this over-ſpreading of Redneſs does not break forth freely, or diſappears ſooner than it ought, for the moſt part, that whitiſh Cruſt enſues in the Parts of the Mouth. This Symptom, when after this manner it moleſts Infants, is wont to be aſcribed to the fault of the Milk; in feveriſh Perſons the ſame is vulgarly attributed to thick and fuliginous Vapours rais'd from the Stomach: but it ſeems more likely to me, that in both, this Affect ariſes from the Impurities of the whole Blood, (and haply, in ſome meaſure of the nervous Juice) depos'd about theſe parts; for, as often as in the Maſs of both Humours, ſomewhat extraneous inwardly mixt with them, is contain'd, which is neither to be blown off by Swear, nor is eaſily ſent away by Urine, that very often is fix'd about the Mouth with a ſerous Filth; whence catarrhous Affects, Tumours, and troubleſome Spittings, are rais'd: for in regard, for the Maſtication of Food, the ſalival Humour ought to be plentifully diſcharg'd in this Place, Nature often endeavours to ſend forth here what is ſuperfluous, or otherwiſe troubleſome, by theſe open and accuſtomed ways of Excretion: hence, after *Mercury* is given, when both the Blood and nervous Juice are abundantly fill'd with its Particles moſt minutely divided, and endeavour to ſend them forth involv'd in the Serum, becauſe they are not able to exterminate theſe mercurial Cor-

puſcles, inwardly mix'd with them, neither by Sweat, Urine, or other way; what remains, they ſtrive to expell the ſame, mixt with the Serous Latex, by the Arteries and other Ductus's, which convey the Spittle to the Mouth. In like manner alſo in Fevers, when after a long Deflagration of the Blood, the aduſt Matter is much heapt together, whereof a good part, remaining after the Criſis, is ſtill mixt with the Blood and nervous Juice; or being fix'd on the Brain, or other place, is again drank up by the ſame; it's probable that that matter, by long Coction, is ſo parch'd, and grown thick almoſt like Glew; wherefore it is neither to be blown off by Sweat nor inſenſible Tranſpiration, nor is fit to be ſeparated by the urinary Paſſages, but at length diſtills forth by degrees from the little Arteries, and other Ductus's of the *Saliva*, which open themſelves into the Mouth, (as being the uſual way of Excretion) and preſently, by reaſon of its thickneſs, it ſettles into that clammy Humour. The ſame Reaſon holds concerning Infants, whoſe Blood being rendred impure, from the Filth contracted in the Womb, preſently, by making an outward Efflorescence, it endeavours to purge it ſelf; which, if by reaſon of the Thickneſs of the Matter, it does not ſucceed well, preſently the viſcous Impurities are exterminated this way, as the more open. I knew a certain Perſon in the Declination of a Fever, who had not only an Incruſtation of this kind of a clammy Humour in the Parts of the Mouth, but a copious Salivation, as tho he had taken Mercury, was raiſed in him for many Days, with a ſtinking Breath, and a ſwelling of the Tongue and Gums.

7. A Head-ach is raiſed in Fevers by reaſon of the *Meninges* of the Brain being twitcht by Vapours, and by a ſharp and boyling Blood; for, the Blood being violently moved, it is carryed in a greater Plenty to the Head by reaſon of the ſtreight Direction of the great Artery, than to the inferiour Parts, to which it is carryed obliquely. And ſometimes Head-achs ariſe by reaſon of the nervous Juice (which is ſupplyed from the boyling Blood) being too ſharp and pungent; wherefore, when the Membranes and nervous Parts are irrigated with the ſame, being twitcht by its Acrimony, they are caſt into Pains and Contractions.

8. In like manner alſo, the other Affects of the Head, as Watchings, a Delirium, a Frenzy, Convulſions, *&c.* ſometime ariſe from the Blood making an Effort, and ſo raiſing diſorderly Motions in the Brain; ſometimes alſo from the nervous Juice degenerated, and therefore become diſproportionate for the Governance of the animal Spirits: but moſt commonly theſe kinds of Symptoms are riſe in Fevers by reaſon of a Metaſtaſis of the febrile Matter from the ſtock of Blood into theſe Parts; for the Blood being full of aduſt Recrements remaining after Deflagration, endeavours (like working Wine) wholly to ſubdue them, and to exclude them from its Society, which when,

when, a flowing hapning, it is not able to expell by Sweat, Urine, or an Hœmorrhagie, it often conveys them into the ſubſtance of the Brain, and there fixes them: and hence chiefly the foreſaid Affects, when they are fixt and firmly rooted, take their Riſe; but, when they are light, and eaſily moveable, they often proceed from the Cauſes before mentioned.

9. Convulſive Motions happen in Fevers for divers Cauſes; ſometimes by reaſon of a Matter heapt together in the firſt Paſſages, which, by reaſon of its mighty Pravity, twitches there the membranous Parts, and afterward, by the Conſent of the *Genus nervoſum*, preſently a Convulſion is communicated to the Origine of the Nerves in the Brain; and thence is retorted ſometimes into theſe Parts, ſometimes into others: after which manner, Worms gnawing in the Entrails, ſharp Humours moved, and venemous Medicines, cauſe Convulſions; or ſecondly, when a Fever partakes of ſome Malignity: ſo Convulſions frequently happen in the Small Pox, Meazles, or Plague; to wit, becauſe the Blood is altered from its benign and natural temper to a venemous Nature, whereby the Nerves, and their Origines, are put upon Motions and Contractions: often alſo, without a ſuſpicion of Malignity, in a Putrid Fever, convulſive Motions are cauſed by reaſon of a Metaſtaſis of the febrile Matter to the Brain, as it was hinted even now; ſo I have often obſerv'd, when a Diſeaſe is not preſently ſolv'd by a Criſis, the Diſeaſed lye ill of a long Sickneſs, and become obnoxious to convulſive and trembling Motions. Thirdly, For the moſt part, in every Fever, convulſive Motions are the ſad Fore-warners of Death; which I think to happen not only through the malignity of the matter, whereby the *Genus Nervoſum* is twitcht and troubled, but becauſe the Spirits being very much exhauſted and weakned, do not ſufficiently influence and extend the Bodies of the Nerves; wherefore being relaxt from their wonted Tenſion and tonick Motion through the weaker effort of the Spirits, they are ſtill put upon a diſorderly motion.

10. Swooning is wont to be cauſed many ways in Fevers, but chiefly for three Cauſes; *viz.* Either through the Mouth of the Stomach being affected, which part being interwoven with ſundry Plexus's of Nerves, is very ſenſible; and becauſe from the ſame branch of the ſixth Pair, branches of Nerves are derived to the Heart and Ventricle, if the Orifice of the Ventricle, ſo beſet with Nerves, be affected with great Pain, the offence alſo is communicated to the Heart, and in this the Motion is either ſtopt, or at leaſtwiſe a diſorderly one is raiſed, whereby the even afflux of the Blood and Spirits is interrupted for a time. I knew a certain Perſon, in an acute Fever, ſeiz'd with a frequent ſwooning; which Affect, nevertheleſs, wholly ceaſed after that he had caſt up, by Vomit, a long and round Worm. Secondly, a ſwooning alſo is ſometime cauſed, becauſe a venemous Matter is circulated

culated with the Blood, which fixes and extinguiſhes the vital Spirits on a ſudden, and congeals the Blood it ſelf, that it is apt to ſtagnate in the Heart, as it is uſual in the Plague, Small Pox, *&c.* of which we ſhall ſpeak particularly beneath. Thirdly, A Swooning is wont to happen by reaſon of the fine Texture of the Spirits, which being very thin and ſubtle, eaſily yield to a Fainting upon any immoderate Motion or Pain: ſo I have known ſome, who lying ſtill in their bed were well enough, but being moved to any ſide, preſently fainted.

11. A *Cardialgia* happens in Fevers, when the Ventricle, and eſpecially its Orifices, being very ſenſible by reaſon of the manifold Inſertions of Nerves, are beſet with a ſharp and bitteriſh, or alſo with an acid and corroſive Humour; for hence a Pain ariſes from the Acrimony of the Humour, after the like manner as when the *Sphincter* of the *Anus* is affected with a tedious Pain in bilous Dejections.

12. For the like Cauſe, a Vomiting and a Nauſeouſneſs are wont to be raiſed; to wit, the Ventricle being beſet and irritated to a Contraction by a matter which is extraneous and not agreeing with it ſelf. Such an excrementitious matter is heapt together in the Ventricle, after three manners: for, either the Aliments, partly through defect of an acid Ferment, wherewith they ought to be duely concocted; partly by reaſon of the burning Heat of the Ventricle, are parcht into ſuch a Maſs of Corruption: or ſecondly, this kind of Matter is depoſed into the cavity of the Ventricle, from Arteries terminated in it, as it uſually happens in the Small Pox, Plague, and malignant Fevers: or thirdly, meer Choler expreſt from the *Meatus Choledochus* into the *Inteſtinum jejunum*, by reaſon of an inverted, and, as it were, convulſive Motion of the Inteſtine, is caſt up into the Stomach. The loſs of Appetite alſo happens by reaſon of the Ventricle being filled with vitious Juices, and becauſe the acid Ferment is wholly perverted by the ſcorching Heat. Theſe kinds of Affects of the Ventricle and Viſcera, ſometimes ariſe from an excrementitious matter, (*viz.* the Alimentary degenerated whilſt it was concocting) heapt together in the firſt Paſſages a long time before the Fever, which often is the occaſional Cauſe of the Fever it ſelf: but ſometimes the *Nauſeouſneſs*, *Loſs of Appetite*, *Vomiting*, *Cardialgia*, &c. are the immediate Products of the Fever; for, when the day before the falling ſick the Affected had a Stomach good enough, aſſoon as the immoderate Effervescence is brought on the Blood, whilſt that boyls above meaſure, both the Effluvia and Recrements wont to be evaporated outwardly, and the bilous Humour flowing from the *Vaſa Choledocha*, are pour'd into the Stomach, with which its Craſis is perverted; and the Relicks of the Chyle, and other Contents in the Viſcera, are mightily depraved, whence the foreſaid Affects draw their Origine.

13. Nor

13. Nor is a Looſneſs a leſs frequent ſymptom in Fevers, which ſometimes happens about the beginning of the Diſeaſe, and ariſes (for the moſt part) either from the Choler flowing from the *Vaſa Choledoca*, into the *Duodenum*, or from the Recrements of the Blood and Nervous Juyce pour'd from the Arteries and Ductus of the Pancreas into the Inteſtines: Sometimes alſo about the height of the Diſeaſe, and in its declining ſtate a looſneſs is raiſed: and ſo either Nature being conquereſs, the groſſer off-ſcourings of the Blood are this way Critically voided, or the ſame being overcome, the looſneſs is an effect and ſign of the Viſcera being wholly diſſolv'd in their ſtrength and firm tone. Sometimes it happens in a Fever that the Belly is alwayes bound, and unleſs irritated by a Medicine it diſcharges nothing, and tho the Diſeaſed have taken only liquid things for many dayes, the ſtools are alwayes of a ſolid and hardiſh conſiſtency: and this ſeems for the moſt part to be done, when the Blood burning greatly with a ſmart heat, conſumes the moiſture lying in any part like Fire; and by a copious emiſſion of ſtems draws the watery matter from the Viſcera into it ſelf, and preſently cauſes it to evaporate outwardly; wherefore the groſſer part left in the Inteſtines, is thickned by the parching heat, as the *Caput Mortuum* remaining after diſtillation.

14. The bloody Flux is an affect ſo frequent in continual Fevers, that in certain years it becomes Epidemious, and being as bad as a Plague, it kills many; the cauſe uſually is not a humour produ'd inwardly in the Viſcera, which corrodes the Inteſtines with its Acrimony, (as ſome aſſert) but ſome Miaſm paſt into the Blood, and ſo inwardly mixt with it, that it cannot be forc'd from the Blood under the form of a Vapour or ſincere Humour: wherefore being driven toward the Inteſtines, it opens the Mouths of the Arteries, and cauſes little Ulcers and Diſtillations of Blood there, as when from a feveriſh Blood taking toward the Skin, Puſhes and inflamed Swellings break forth outwardly; and it is likely that thoſe affects of the bloody Flux which accompany malignant or epidemious Fevers may ariſe from a certain coagulation of the Blood.

The Pulſe and Urine bring up the rear of the Symptoms and Signs in a putrid Fever, which are chiefly to be minded for knowing both the ſtate of the Diſeaſe, and the ſtrength of the Diſeaſed; for there being two things by which our Life is ſupported, *viz.* Heat kindled in the Heart, and Coction to be perform'd in the Viſcera and Veſſels, becauſe the Pulſe and Urine excellently ſhew the alterations cauſed in both by the Fever, therefore hence a moſt certain Judgment is taken of the affect whether it will terminate in Death or a Recovery. Firſt, we conſult the Pulſe as a Thermometer conſtituted by Nature for meaſuring the heat kindled in a Fever: which if it be intenſe, and raiſes a great ebullition of the Blood, the Artery has a vehement and quick beat, as long as the Spirits hold a good Vigour; afterward the ſame being

being ſomewhat exhauſted, the ſtrong Pulſe remits, which nevertheleſs is recompens'd by quickneſs, and becomes quick and ſmall. If the Fever be mild, and be attended by a leſs burning, the Pulſe alſo declines leſs from its natural ſtate; and in the whole courſe of the Diſeaſe the moderation of this denotes a truce of Nature, nor does the Pulſe only diſcover the ſtrength of the Fever, as it were of the Enemy, but plainly ſhews alſo the ſtrength of Nature, and its ability of reſiſting: as long as the Pulſe is laudable, things are in ſafety, and it gives very good hope: but from the evil ſtate of this a very ill omen is given, and a deſpair of doing well. So that without a frequent and diligent examining of the Pulſe, the Phyſician can neither make a due prognoſtick, nor ſafely order a Medicine.

1. As to the firſt: he ought to know (as far as he may) what ſort of Pulſe a Perſon has according to his natural Conſtitution, for in ſome it is ſtrong, in others weak; again in each change of Fevers he muſt weigh by what degrees it differs from its natural ſtate; for one while it is more vehement than it ought, and argues the Fever to be intended: another while it's depreſt lower than uſual, and denotes the Spirits and Strength to be dejected.

Thoſe whoſe Artery has a weak and languid beat in their ſtate of Health, when they are taken with a Fever it is not ſo very ill with them to have a ſmall and weak Pulſe, that we muſt preſently deſpair of their well doing: thoſe who have naturally a ſtrong and vehement Pulſe, if after the Criſis of the Diſeaſe it ſcarce holds a mean Vigour, tho it be not altogether weak, it argues the ſtate of the diſeaſed to be ſuſpected, and not ſafe.

If at the beginning of a Fever, before the Blood has much burnt, or if after a Criſis, when part of the burthen is diminiſht, or if at another time the Pulſe becomes weak without an evident cauſe, it fore-bodes ill: but if after long Watchings, or after a great Evacuation, the Pulſe becomes ſomewhat weaker, we may not therefore deſpair of a Recovery: becauſe Strength dejected or impair'd by theſe means may be again reſtor'd, and the Spirits may be refreſht.

When the Pulſe on a ſudden is altered for the worſe, tho the Diſeaſed as to the reſt of the Symptoms ſeems to himſelf to be better, you may give a ſad prognoſtick of Death, and on the contary, tho horrid Symptoms are preſſing, if notwithſtanding the Pulſe be laudable, we may ſtill hope for a Recovery. If in a robuſt man, being in a Fever, the Pulſe becomes very ſmall and formicating, Death is near at hand.

2. In giving Medicines, Cautions and Rules of no ſmall moment are taken from the Pulſe: Purging and Vomiting are prohibited by an over quick and violent Pulſe, alſo by a low and depreſt one: for when the Blood boyles too much, an evacuation does little good, both becauſe that which is offenſive is not ſeparated, and alſo for that by that

that Perturbation the ſtrength is more debilitated. And when the Spirits are broken, and the Strength dejected, a Purge caſts them down more, and ſometimes wholly reſolves them. Wherefore when a Phyſician thinks of an evacuation upward or downward, firſt let him try the Pulſe, and let him ſet upon this work only when Nature is ſtrong and in a calm; that it may both be at leiſure for the Operation of the Medicine, and have Strength enough to bear it.

Nor is there need of leſs Circumſpection in Diaphoreticks and Cardiacks; which if they are given in the feveriſh fit, they too much intend the motion of the Heart, which before was violent, and very often break its ſtrength: and when the Pulſe is very faint, if hot and ſtrong Cordials are given, Life is eaſily extinguiſht, (as when a ſmall Flame is preſt with a ſtrong blaſt of Wind) wherefore its a vulgar obſervation that Cordials often accelerate Death, for that by too much exagitating the Blood, they ſooner conſume the Strength.

There is yet need of the greateſt Caution and Direction of the Pulſe in giving Narcoticks; for thoſe (becauſe they perform their Operation by extinguiſhing and fixing the over fierce vital Spirits) if they are uſed in a weak or wavering Pulſe, either by diminiſhing the vital Spirits they render them wholly inſufficient for the Diſeaſe; or by ſuffocating them too much they bring a perpetual ſleep: wherefore in a languid, unequal, or formicating Pulſe let Opiates be ſhun'd of all things.

The uneven and intermittent Pulſe have an ill name in the writings of Phyſicians: yet tho they are lookt upon as ill, they do not ſo certainly portend Death as a weake Pulſe: for I have known many with thoſe kinds of ſigns to have eſcapt, who were condemn'd to the Grave: for the diſorder of the Blood and Spirits may much more certainly and eaſily be reſtrain'd or appeas'd, than their dejection be reſtored.

2. The inſpection of Urines in Fevers has more of certainty than in any other Diſeaſes, and is of very great uſe: for hence the ſtates of the ſick Perſon and of the Diſeaſe are excellently known, and the phyſical Intentions concerning things to be done are hence beſt directed: ſome of the chief Obſervations and Rules concerning this matter are as follows.

Concerning the Urines of Perſons in Fevers, the things chiefly to be obſerved are the Colour, Conſiſtency, Contents, and ſetling; the colour of the Urine ſhews the degree or exceſs of heat in the Blood, which as it is increaſt, or is more remiſs, the Urine alſo is more or leſs ruddy.

Nevertheleſs the Urines of ſome are mighty ruddy, when they are but lightly feveriſh: and on the contrary, the Urines of others troubled with the burning heat of a Fever are leſs coloured. Thoſe who abound with a vigorous heat, and a very hot Blood, or are obnoxious to the Scurvy, Ptyſick, or the Hypocondriack affect, when upon taking cold,

or through a Fulneſs, Surfeiting, or drinking Wine, they are ſet upon by any ſmall Fever, they make an intenſly ruddy Urine, becauſe the Particles of the Salt and Sulphur are exalted, and half diſſolved in their Blood before; wherefore, of neceſſity, when the Fever preſſes, they are more incocted in the *Serum*: on the contrary, thoſe who having a cold Temperament, and a weak Pulſe, are taken with a Fever, tho they have a greater Effervescence of the Blood, void a Urine leſs coloured.

The *Conſiſtency, Contents, and Setling of Urines*, being placed, as it were, in the ſame Rank, depend altogether on the aduſt and recrementitious Matter, which remains in the Blood after the burning of the Fever: if there be a plenty of this, the Conſiſtency of the Urine becomes ſomewhat thick; and after it has ſtood, it is troubled by the Cold: if either the quantity of this be leſs, or it be derived elſewhere than to the Reins, (to wit, if it be withdrawn by Sweat, or by a critical Metaſtaſis into this or that part) the Conſiſtency becomes more thin, and the Liquor remains clear. And the Particles of this matter furniſh the Contents of the Urine, which are diverſly diſpoſed according as the nutritive Juyce is one while ſomewhat concocted and aſſimilated by the Blood, another while is wholly perverted, and turns to a maſs of Corruption. Some ſigns of Coction and Aſſimilation are given in the Urines of Perſons in Fevers, ſometimes by a laudable Hypoſtaſis, ſometimes by certain Rudiments and Foot-ſteps of the ſame. A Privation of an Hypoſtaſis, and a confuſion and troubled ſtate of the Parts of the Urine, denote Coction to be vitiated: and as this matter is more or leſs parched in the Blood, the Contents are ſometimes pale, ſometimes of a yellowiſh Colour like oker. According as the Recrements mixt with the Blood, either the Spirit prevailing, begin to be ſubdued and ſeparated; or the ſame being too much depreſt, are leſs able to be ſeparated, alſo the Contents of the Urine are wont, more or leſs, ſooner or later, to be ſeparated from the reſt of the Urine, and to ſubſide towards the bottom.

As to the *Prognoſticks* to be taken from the Urine, we obſerve, That ſomewhat a remiſs Colour of the Urine, a mean Conſiſtency, a few Contents ſubſiding of their own accord, or readily gathering together into a little Cloud, portend Good: on the contrary, an intenſe Redneſs, a thick and troubled Conſiſtency, groſs and opake Contents, which ſlowly, or ſcarce at all, ſubſide towards the bottom, denote a great Effervescency, a plenty of aduſt Matter, and its ſubduing and ſeparation to be difficult, or fruſtrated.

As to Phyſical Directions, the thing conſiſts in this; that by a frequent Inſpection of Urines we attend to the Motion of Nature, and readily follow it; nor muſt we move by Purging or Sweat, but when ſome Hypoſtaſis ſhews ſigns of Coction and Separation in the Urine.

CHAP.

CHAP. X.

Of the Signs and Cure of the putrid Synochus, or continual Fever.

BEſides what is ſaid before of the *putrid Synochus* in general, there are moreover certain Varieties, or Irregularities (not to ſay Species) of this Diſeaſe, by which this Fever ſomewhat declines from this common Rule; and by reaſon of certain accidental Affects, gets new Names and Diſtinctions.

Firſt therefore, a *putrid Synochus* is wont to be divided into a *ſymptomatick* and an *eſſential* one. That is ſaid to be *ſymptomatick* which draws its Origine from ſome other Affect or Diſeaſe firſt raiſed in the Body; ſo that the Fever is only the ſymptome coming upon that other Affect, as that is accounted which depends on a *Squinancy*, *Pluriſie*, *Wound*, *Ulcer*, &c. in or near ſome principal Part; of which we think ſomewhat otherwiſe; to wit, that in Truth there is no Putrid Fever which is merely ſymptomatical; occaſionally perchance it may ariſe from ſome other Affect; but it is founded immediately in the ſulphureous part of the Blood too much heated, and as it were kindled: for, without a Procatarxis or precedent Indiſpoſition of the Blood, the foreſaid Affects ſeldom, or ſcarce at all, bring a putrid Fever.

As to the Squinancy, Pluriſie, and the like, I ſay that thoſe are Products of the Fever, or Affects following it, but not Cauſes of it; for moſt commonly an evident Cauſe has preceeded, which has produc'd the feveriſh Effervescence of the Blood, as a taking of Cold, an Evacuation reſtrain'd, *&c.* afterward, tho the Diſeas'd are not forthwith openly feveriſh, nevertheleſs, a greater Ebullition of the Blood than uſual is raiſed; as we may eaſily gather from the Urine, Pulſe, and Reſtleſneſs of the whole Body. After ſome Days, (ſometimes ſooner, ſometimes later) an Inflammation is produced in this or that part; whereof a probable Reaſon enough is thus aſſigned: The Blood by reaſon of the Effluvia retained (which are like a Ferment) is increas'd in bulk, and ſwells its Veſſels more than uſually; and when through defect of Ventilation, it is ſtraitned in the ſpace of its Circulation, it readily finding a way, ſprings forth of the Arteries; and being extravaſated, upon the courſe of Circulation its being interrupted, it is raiſed into a Tumour; and becauſe by that kind of Tumour a Heat and Pain in the Part are made more intenſe, the Blood is more troubled in its motion, and ſo the Fever, firſt kindled, is more aggravated.

Moreover, in these kinds of Fevers we may observe a certain aptness of the Blood to coagulate, whereby it becomes less fluxile, and so apt to be congeal'd in the lesser Vessels: even as we find in Milk when it begins to turn sour, for then it cannot be boyl'd nor warm'd on the Fire without coagulating: in like manner we have reason to suspect in the Blood also a certain Disposition to turn sharp, by reason of which it is obnoxious to coagulation; for it plain enough appears, that in the Phrensy, Peripneumonia, Squinancy, and the like Diseases, an Inflammation or Extravasation of the Blood does not always depend on the exuberancy of the Blood, and the plenitude of the Vessels: for often with a weak Pulse, and a subsiding of the Vessels, the Blood is stopt in its Motion, and being extravasated in the side or else where, causes an acute pain.

It only remains for us to enquire whether the Fever which accompanies these affects, be to be accounted of the number of those which are called putrid, or not; To this we reply, that oftentimes they are *simple Synochi*, in which only the subtle and more spirituous part of the Blood is inflamed, and therefore, if after a copious taking away of Blood, or the Vessels being emptyed by sweat, the extravasated Blood be restor'd to Circulation, presently the Effervescence is restrain'd, and the Fever in a short time is appeas'd: Nevertheless sometimes when a Prediposition happens, as in a *Plethora*, or mighty *Cacochymia*, a putrid Fever is kindled together with these kinds of affects wholly from the same occasion.

Among *Symptomatick Fevers* they place that which is vulgarly call'd *Febris Lenta*, those that are troubled with this grow hotter than they ought, especially after Meats, or any Motion, or Exercise, the Urine for the most part is ruddy, the Spirits are weak, and the Strength dejected; as to Appetite and Sleep they find themselves indifferently well, they are without a Cough, or much Spitting: but daily (like consumptive Persons) they pine away, and without any manifest cause: the fault for the most part is ascribed to Obstructions in some one of the Viscera (suppose the Liver, Spleen, or mesentery) by whose default, the Food is not well concocted, nor duely dispen'd: but it seems to me that this kind of affect is immediately founded in the evil Disposition of the Blood, whereby it inclines to an over-salt and sharp Temper, and therefore is rendred less apt for Nutrition, and an even Circulation.

But the Fever which most deserves to be called Symptomatical, is that which is raised in Ptysical Persons from an Ulcer or Consumption of the Lungs: for the Blood, whilst it wholly passes through the Lungs in its circulation, often imprints on this entral the Ideas of many Diseases; and on the contrary, from the Lungs being ill affected, it receives the same. Whatsoever impure is contain'd in the Mass of Blood is cast forth of the extremities of the Arteries, as the flowrings

of

of new Wine: Wherefore, when Nature being become weak, is not able to convey its Recrements to the ſuperficies of the Body, it depoſes the ſame in the Lungs by a nearer way of purging it ſelf. Hence a mighty Cacochymia, and many Cronick Diſeaſes frequently end in a Ptyſick. In like manner, when the fleſh of the Lungs conſumes, or abounding with an ulcerous Ichor, is become half rotten, the blood paſſing through it is infected with the purulent matter, or the conſumptive filth, and conſequently is put upon a continual Effervescence, by reaſon of that immiſcible Subſtance being confounded with it, wherefore it brings an aſſiduous Fever, and wholly perverts the nutritive Juyce: the like reaſon holds concerning Fevers cauſed from an Ulcer, or Abſcſs often happning in other parts: for thoſe even as the conſumptive Conſtitution of the Lungs, often bring the Ptyſick, or hectick Fever: a full conſideration of theſe things belongs not to this Place, wherefore let us return to the putrid Fever properly ſo call'd, or eſſential Fever.

The *eſſential putrid Synochus* is wont to be divided into the putrid (ſuch is above deſcrib'd) into the *Cauſus* or moſt ſharp burning Fever, and moreover into the *quotidian*, *tertian*, and *quartan*. The putrid Synochus even now deſcrib'd ought to be the Rule or Square of the reſt, according to the Type of which, for the moſt part Fevers which are of this kind are compounded, as to the reſt even now mentioned, I ſhall briefly ſet them down according as they vary their Species.

A *Cauſus* or *burning Fever* is that which performs its courſe with a great burning, an intollerable Thirſt, and other Symptoms ſhewing a mighty Inflammation of the Blood: its formal Nature wherein it's different from the reſt, conſiſts in this, that the temper of the Blood in thoſe that are affected with it, is hotter, that is, it more abounds with a combuſtible Sulphur; therefore when it rages, it is kindled in a greater plenty, and by its burning diffuſes Effluvia's of a moſt intenſe heat throughout the whole Body; its Motion is acute, and ſoon comes to its height, it is attended with more horrible Symptoms than others, it has a difficult Criſis, and its event is very dangerous.

Now as to what regards thoſe periods or paroxiſms in which a putrid Fever now and then at a ſet time is wont to have a ſharp fit, and (intermitting, as it were) ſometimes every day, ſometimes every other, or fourth day reſumes its febrile accenſion as it were: the reaſon of this which ſeems to me moſt likely, is as follows. In a continual Fever there are two chief things (as we have hinted above) which for the moſt part cauſe the Effervescence of the Blood, *viz.* an exaltation and action of the ſulphureous part in the Blood; and then conſequently a heaping together of the aduſt matter remaining after the deflagration of the Blood, to a Turgeſcency: on the former, the continuity of the Fever, on the other its height and critical Perturbations depend: to

theſe

theſe ſometimes a third thing is added, to wit, a fulneſs and turgeſcency of a crude Juice from Aliments freſh gathered together, which at ſet intervals of times cauſes a greater effervescence in a continual Fever (as in the fits of Intermittents.)

Concerning the Cure of putrid Fevers of what kind ſoever, *there are four general intentions*, on which the whole ſtreſs of the Buſineſs lies. *Firſt*, that the Blood (if it may be) be freed from its burning, and that the Flame or Fire kindled in its ſulphury part be wholly ſuppreſt, which often happens to be done about the firſt beginnings of this Diſeaſe. *Secondly*, that when the Blood, being ſet a burning, cannot preſently be extinguiſht, it may go on with it at leaſt mildly, and with as little dammage as may be. *Thirdly*, that the burning being over, the Liquour of the Blood may be clear'd of the Recrements of the burnt and aduſt Matter, and be reſtor'd to its natural Vigour and Craſis. *Fourthly*, that the Symptoms chiefly preſſing be ſeaſonably obviated, without the removal of which the attempts both of Nature and Phyſick will be in Vain.

As to the particular Remedies, with which thoſe intentions are anſwer'd, there are various Preſcripts, and Forms of Medicines every where in uſe, not only amongſt Phyſicians, but likewiſe old Women and Empricks; from which nevertheleſs, in regard they are us'd like a Sword in a blind Mans Hands, without difference, and an exact Method of Healing, more dammage than benefit often accrues to the Diſeaſed. It will not be needful for me to repeat in this Place the Forms of Purgers, Cardiacks, or other Medicines neatly enough delivered in many Authors. I ſhall briefly ſet down ſome of the chief Indications, and Phyſical Cautions which ought to be obſerved in the courſe of this Fever, according to the various Seaſons, and divers Symptoms of it.

1. About the *firſt Invaſion* of this Diſeaſe, you muſt endeavour that the Fever be forthwith ſuppreſt, and that the inflammation of the over-heated Sulphur may be ſtopt; to which *breathing a Vein* chiefly conduces; for by this means the Blood is ventilated, and the hot Particles too much crowded together, and even ready to fall a burning, are diſſipated from each other, as when Hay, being apt to take on Fire, if it be expos'd to the open Air, its kindling is prevented: Moreover, let a thin diet be ordered: in which nothing ſpirituous or ſulphureous ought to be us'd: let the Viſcera and firſt Paſſages be freed from the Load of Excrementious Matter; Wherefore Clyſters will be of neceſſary uſe, ſometimes alſo Vomits, and gentle Purges, which being now and then given ſeaſonably and with judgment, the Fever preſently at the beginning, its Fuel for accenſion being withdrawn, is extinguiſht. But if notwithſtanding this Method the burning gets Ground, and daily more and more lays hold on the ſulphureous Particles of the Blood: let it be procur'd

cur'd (as far as may be) that the deflagration goes on gently without any great Commotion.

2. Wherefore, when the *Fever* is in its *Increaſe*, if the Blood boyls too much, and very much extends the Veſſels with a ſtrong and vehement Pulſe, if Watchings, a Frenzy, or Head-ach, violently preſs, bleed a ſecond time, and let as free a Tranſpiration (as may be) be procur'd: wherefore, let the Diſeas'd, for the moſt part, lye in Bed, let the Diet be ſpare, of very thin Food; alſo, let the Drink be ſmall, and plentiful, that the burning Blood may be freely diluted with Serum. Clyſters are given with Safety, and indeed, with good Effect; but let Medicines, whether Catharticks or Diureticks, and which too much exagitate the Blood, be avoided with the ſame Induſtry as Blaſts of Wind are where Houſes are on fire; nay, rather Opiates and Anodines, which fix and conſtipate the Blood and Spirits, are to be uſed: alſo, Juleps and Decoctions, which cool the burning Bowels, qualifie the Blood, and refreſh the Spirits, are frequently to be given. Acetous Liquors of Vegetables or Minerals, alſo Nitre purified, becauſe they reſtrain the burning of the Blood, and quench Thirſt, agree well: let hot and ſpirituous Waters, cordial and Bezoartick Powders (ſo the Diſeaſe be without Malignity) be let alone. In caſe the Blood circulates unevenly, and be carried more violently toward the Head than the Feet, Epithemes of the warm Fleſh, or Inwards of Animals, applyed to the Feet, do well.

3. When the Fever is at its height, let the motion of Nature be diligently minded, whether it be about to make a *Criſis* or not; wherefore, nothing is to be attempted raſhly by a Phyſician: breathing a Vein, or ſtrong Purging, are wholly forbidden: but afterward, when the burning of the Fever is in ſome meaſure remitted after the Deflagration of the Blood, and ſigns of Concoction appear in the Urine, in caſe the Motion of Nature be ſluggiſh, a Sweat or gentle Purge may be procured, which, nevertheleſs, are performed better, and with more Safety, by a Phyſician, when Nature before, by a critical motion, has ſet upon a ſecluſion of the morbifick matter. But if all things are crude, and in a Perturbation, the Urine be ſtill troubled without a Sediment or a Separation of Parts, if the Strength be faint, the Pulſe weak, if no Criſis, or only a fruitleſs one, has preceded, any Evacuation, either by Sweat, or Purging, is not attempted without manifeſt Danger of Life: but we muſt expect longer, that the Spirits of the Blood may recover themſelves, and in ſome meaſure ſubdue the recrementitious and aduſt Matter, and afterward, by degrees, ſeparate them; mean while, let the Strength be refreſh'd with temperate Cordials, let the immoderate Effervescence of the Blood (if it be ſo) be ſtopt; and let its due Fermentation be upheld, which, in truth, is excellently performed by Coral, Pearl, and thoſe kinds of Powders, which are diſſolv'd by the Ferments of the Viſcera, and after-

afterward ferment with the Blood, and greatly reſtore its weak and wavering Motion. Mean while (whilſt Nature labours) let all Obſtacles and Impediments be removed, and eſpecially let the ſtore of Excrements heapt together in the firſt Paſſages, be withdrawn by the frequent Uſe of Clyſters.

4. After what way or method the Symptoms chiefly preſſing ought to be handled, it is not an eaſie thing to preſcribe by certain Rules; becauſe the very ſame ſometimes require to be forthwith reſtrain'd and appeas'd, ſometimes to be moved on farther: and thoſe that have ſomewhat greater in them, haply at another time are to be left wholly to Nature. This, in ſome, may be obviated with aſſwaging and lenifying Remedies, but in others with a rough and irritating Phyſick: mean while, it is a Precept to be ſtood to in all, that we religiouſly follow the Footſteps of Nature: which, if it acts amiſs, its Diſorder is to be reduced; if rightly, but too vehemently, it is to be checkt; and if rightly, but ſlower or weaker than it ought, it muſt be our buſineſs to encourage and aid its Effort by phyſical means.

5. In *the declining ſtate of a Fever*, when after a perfect *Criſis*, Nature has gotten the upper-hand of the Diſeaſe, things are in Safety; nor is there much left for a Phyſician to do: it only remains, to propoſe an exact form of Diet, that the Diſeaſed may ſoon recover their Strength without fear of a Relapſe: alſo it is good to clear the Remainder of the febrile matter by a gentle Purge. Concerning the Diet, Men very often incur a Relapſe, to wit, by an over-haſty eating of Fleſh or ſtrong Food, the Diſeaſed fall back into the Fever; for ſince the Viſcera are weak, and do not eaſily concoct Food, (unleſs it be very thin) and ſince the Craſis of the Blood is ſo weak that it does not aſſimilate a ſtrong nutritive Juice, if any thing diſproportionate be brought to either, the œconomy of Nature is again perverted, and all things run amiſs. Wherefore, let ſuch as are upon Recovery forbear a long time from Fleſh, and let them not uſe it till their Urine is become like that of ſound Perſons, and is no longer troubled by the Cold: and indeed, then it will be better to begin with diluted Broth of Fleſh, and afterward by Degrees to riſe to ſtronger Aliments.

6. When, after an imperfect Criſis, the thing hangs in doubt, and is not yet come to a Determination, then the Phyſician has a hard Task: let a diligent Eye be had to the motion and ſtrength of Nature, whether it begins to prevail over the Diſeaſe, or yields to the ſame: if there are ſigns of Concoction, and the Strength holds good, a gentle Evacuation, and only *per Epicraſin*, is to be put in practiſe: mean while, let the chiefly preſſing Symptoms be obviated by fit Remedies, let all Impediments be removed; let the Strength be upheld, as much as may be, by Cordials, and a true method of Diet.

7. When

7. When after an evil or no *Criſis* all things grow worſe, and when the Phyſician, in a manner, deſpairs of the Cure of the Diſeaſe, he may declare the event of it to be ſuſpected, and greatly to be feared: nevertheleſs, we muſt not ſo yield to a bare Prognoſtick that Fear ſhall put us by of all things elſe; but ſtill, as much as lies in the Art of Phyſick, let Care be taken for a Recovery, tho the Caſe be deſperate; let Remedies be uſed to the Symptoms that are moſt dangerous; let the Spirits of the Blood, almoſt extinct, be reinvigorated with Cordials. When we deſpair of a Recovery, let Life be drawn out in length as long as it may be, at leaſtwiſe let an eaſie Death be procur'd.

I ſhall now briefly give you ſome few Examples having regard to each Species of the foreſaid Fever.

A noble Matron, about fifty Years of Age, of a thin habit of Body, a low Stature, and a freſh coloured Countenance, having cloathed her ſelf thinner than uſual on the fifteenth day of *June*, by reaſon of the Summer-heat, in the Evening was taken ill, and upon it, was ſeiſed with a Nauſeouſneſs, and an Oppreſſion of the Stomach: ſhe had wandring Pains troubling her ſometimes in the Shoulder-blade, ſometimes in the Back, being very thirſty, tho without any immoderate Heat. On the ſecond and third day ſhe found her ſelf almoſt after the ſame manner. On the fourth day, after a Vomit given her, *viz. an ounce of the Infuſion of Crocus Metallorum*, ſhe vomited four times a yellow Choler, and purging thrice by Stool, ſhe ſeemed to receive eaſe: the following night ſhe ſlept ſomewhat better; but the next day, the Fever being kindled throughout the Body, ſhe complain'd of a Thirſt, a burning of the Præcordia, and of a Pain ſometimes in the Side, ſometimes in the Back, preſently eight Ounces of Blood were taken from her; her Urine was of a very ſaturated Redneſs, opake, and troubled, without an Hypoſtaſis, or ſubſiding of the Contents; the Pulſe was uneven, and often intermitting: the following Night was without Reſt. On the ſixth day of the Diſeaſe, early in the Morning, a ſmall Sweat aroſe, whereupon the Heat became ſomewhat more mild, which grew more intenſe again in the Evening. On the ſeventh day there was a very ſharp Heat, with a Thirſt, Burning, a diſorderly and intermittent Pulſe, alſo a mighty Reſtleſſneſs of the whole Body. On the eighth, the Symptoms were ſomewhat more remiſs; alſo in the Urine there were ſome Tokens of an Hypoſtaſis: ſhe took on that day, Whey with the Leaves of Meadow-ſweet boyl'd in it; ſhe ſweated freely; the Fever came to a *Criſis*. All the time of her Sickneſs her Diet was only ſmall Ale, Whey, Barley and Oat Broaths; Clyſters were frequently us'd; Drink and cooling Juleps were given her at her Pleaſure.

About the beginning of the Summer, *Anno* 1656. a worthy Man, of an athletick habit of Body, without any manifeſt Cauſe (unleſs that

being very much addicted to Study, he uſed no Exerciſe beſides) fell ill: firſt he complain'd of a Nauſeouſneſs and a want of Appetite, with a violent Head-ach. On the ſecond day he was affected with a cold Shivering, ſometimes with a heat coming upon him by Turns; and likewiſe with a Thirſt, and burning of the Præcordia, with a roughneſs of the Tongue, and an ingrateful Savour: on that Day he took ten Drams of an Emetick Liquor, after which he vomited ſeven times, and threw up a mighty quantity of yellow Choler, and had four Stools: the Night following was reſtleſs, and in a manner without Sleep; at which time, the Diſeaſed, the heat being increaſt, grew more intenſly feveriſh. On the third Day, when the foreſaid Symptoms increaſt, ten ounces of Blood were taken from him: his Urine was ruddy and thick, with a copious Sediment; the Pulſe was quick and vehement; in the Night he ſweated a little, with a ſhort, but troubled, Sleep: the Morning following he ſeemed ſomewhat relieved; but in the Evening all things grew worſe again, with Watchings, and a moſt intenſe Heat and Drought. On the fifth day, after a light Sweat, the burning ſomewhat remitted; which, nevertheleſs, return'd again with its wonted Fierceneſs a little before the Evening; the Night again was without Sleep, with an almoſt continual toſſing of the Body: in the Morning, upon a gentle Sweat, he found a little Relief; in the Evening again there was an Exacerbation of all things; the night alſo was very reſtleſs. About the beginning of the Day following a Sweat happened as before, and ſomewhat more plentifully: this day there was a manifeſt Change toward a Recovery; the Heat and Thirſt abated by degrees; the Urine was leſs ruddy, with ſomewhat of an Hypoſtaſis: afterward, for three days, the Fever leiſurely declin'd; yet he had every Night a certain Fit, tho more remiſs than before. On the eleventh Day he ſweated more freely, and came to a perfect *Criſis*. During the whole time of the ſickneſs he uſed a very ſpare Diet, as deſiring no Food but ſmall Ale, and Whey made with it: he took now and then cooling Drinks, and Juleps of a Decoction of Barley, and diſtill'd Waters; every day, if he had not a Motion to Stool of his own Accord, an emollient Clyſter was injected: he uſed no Medicine beſide, *viz.* either Cathartick or Cardiack; but the Fever being over, he was twice purg'd, and afterward ſoon grew well.

A young Student, about twenty five Years of Age, of a pale Countenance, and a melancholy Temperament, without a manifeſt Cauſe, in *Auguſt*, 1656. began to be ſick: firſt he complain'd of a feveriſh Diſtemper, with a Thirſt, a ſpontaneous Laſſitude, and a want of Appetite. On the ſecond day he was troubled alſo with a Pain in the right ſide, and a Diſtenſion of both Hypocondres, alſo with an almoſt continual Vomiting, Watchings, and a violent Head-ach. On the third day, a Phyſician being called, preſently twelve Ounces of Blood were taken away: in the Evening he grew hotter and deliri-

ous;

ous; afterward a Sweat, tho ſmall, hapning, he was better the next Morning. On the fourth day, he preſently threw up again whatſoever was given him, and was troubled with an almoſt continual ſtriving to vomit; the giving of a Vomitory being propos'd by the Phyſician, both the ſick Perſon, and his Friends, refuſed to admit of it, being taught by Experience of the Danger of it before: a Clyſter being given him, he had ſix Stools, and ſeem'd to be ſomewhat relieved, and the Night following he ſlept a little. On the fifth day again there was a frequent Vomiting, with a continual Thirſt; he burned inwardly; but the ſenſe of that immoderate Heat was not perceivable outwardly to the Touch, becauſe the Recrements of the boyling Blood, which ought to have breath'd forth through the skin, ſeemed to ſtagnate within, and ſo float the Viſcera; therefore in the Evening, for provoking a Sweat, this *Bolus* was given, *Conſerve of Roſes vitriolated a dram, Gaſcoins Powder a Scruple, Laudanum diſſolv'd in Bawm Water a Grain:* That Night he ſlept indifferently, and a copious Sweat enſuing, the Symptoms ſeem'd to be mitigated: nevertheleſs, on the ſixth day all things grew bad again; a Heat throughout the whole Body, a Thirſt, and a burning of the Præcordia preſt violently. On the ſeventh and eighth days the Pulſe was uneven and diſorderly: for the moſt part, he ſpoke delirous, and if he was ſtirr'd in his Bed he fell frequently into a fainting Fit. On the ninth Day the ſame Symptoms continued; moreover, he was troubled with a Contraction of the Tendons, in the Wriſts, and with Convulſive Motions of other Parts, ſo that we deſpaired, in a manner, of his well-doing. That Morning, becauſe Nature ſeemed to yield her ſelf overcome, it concerned us to do what Art could afford; wherefore, intending a copious Sweat as the laſt Refuge, I gave him at one taking, *a Dram of Spirit of Hartſ-born in a little Draught of a Cordial Julep*; from thenceforward, for four Hours, being very reſtleſs and raving, he could ſcarce be kept in Bed; but afterward, Sleep ſtealing upon him, he ſweated very much, and his Caſe was ſoon brought to be out of danger: the following Night, in order to continue the Sweat, I ordered *a Doſe of the Powder of Contrayerva to be given him every ſix Hours.* The Fever, and the Affects of the *Genus Nervoſum*, ceas'd in a ſhort time, and the ſick Perſon recovered.

A Woman about thirty Years of Age, of a robuſt Body, and a melancholy Temperament (as we might gueſs from her very auſtere way of Behaviour) in the third Month after Child-birth, as ſhe gave her Infant ſuck in the Night, the Cloaths falling from her, took Cold, and ſhortly upon it fell into a cold Shivering; a Heat, greater than uſual, followed it, which afterward (a gentle Sweat ariſing) ſoon remitted. On the ſecond and third days ſhe was very thirſty, and had no Appetite, tho without any immoderate Burning, that ſhe ſcarce yet believed her ſelf in a Fever; every Night ſhe lay quiet, but

wholly without Sleep, the Urine was intenſly ruddy, and ſomewhat thick and opake through the multitude of contents, which nevertheleſs being not diſturbed by the cold, continued ſtill after the ſame manner without an Hypoſtaſis or ſubſiding of the parts: on the fourth day, the heat was kindled throughout the whole, wherefore a Phyſician being then firſt called, about twelve ounces of Blood were taken from the Arm: after the letting Blood, and the Belly being copiouſly emptyed the ſame day by a Clyſter given, in the Evening ſhe fell into a Sweat, by which Nevertheleſs being not relieved, ſhe paſt the Night without Sleep as before, tho an Anodyne Medicine were given her: on the fifth day, after a Clyſter injected ſhe had three ſtools, and found eaſe: the Urine ſtill continued the ſame, ruddy and troubled: when it was preſcribed her to have Blood taken from the Vein running under the Knee, the Diſeaſed earneſtly refuſed it, thinking herſelf upon a Recovery: the Night following, after that ſhe had lain without Sleep, and reſtleſs for a long time, at length ſhe fell into a ſore fit, ſuch as is vulgarly ſaid to be Hyſterical, and in the firſt place ſhe was affected with a certain Numneſs or a Senſe of pricking, which ſeiſed the extream parts of the Body, eſpecially the Feet, Leggs and Thighs, and withall with a Flatus violently diſtending the Inteſtines, Ventricle and Hypochondres: ſhe felt in the lower part of her Belly a certain great and heavy thing, as it were, to riſe up gently, which when it was riſen to the Heart, and thence to the Brain, preſently the Diſeaſed failed in her Underſtanding, and for all the Night afterward lay delirous and talkt light-headed: on the ſixth day, after the Belly's being looſned by a Clyſter ſhe came to her ſelf again, was very ſound in her Mind, and ſeemed to be indifferently well: but in the Evening, as ſhe was moved in her bed, ſhe began to feel an invaſion of ſuch a kind of fit, as before, to wit, in her whole Body ſhe had a ſenſe of Pricking, as tho ſhe were ſtung with Nettles: and withall in her Belly ſhe felt a Ball, as it were, which creeping upwards diſtended the inteſtines and Ventricle, ſo that ſtore of Flatus's and Belchings were thence cauſed: for relief ſhe deſired cold Water might be given her to drink, moreover Remedies uſual in Hyſterick Affects, as *Caſtoreum*, a ſmell of *Aſſafetida*, Fumes of Feathers burnt, Ligatures, and Frictions of the Legs and Thighs, and the like things were uſed, by which ſhe ſeemed for the preſent free from the ſaid affect, and was wholly cleared from it for four hours; but as ſhe lay on her Back in the Bed, ſettling her ſelf to ſleep, on a ſudden ſhe complained that the ſame Symptoms pervaded her whole Body together, and preſently upon it fell into a Delirium, all the night without ſleep, howling and crying, ſhe talkt light-headed; on the day following, ſhe lay with her Eyes open, without Motion or Speech; in the Evening again, as the Fever increaſt, the Diſeaſed grew raving, that ſhe could ſcarce be kept in her Bed; and ſo for three dayes, ſometimes ſhe lay delirous, crying and howling,

howling, ſometimes ſtupid as it were without Motion or Speech, but ſtill ſhe was troubled with convulſive Motions about the Tendons of the Muſcles; on the tenth day ſhe fetcht her Breath deep and ſhort, with a weak, and as it were formicating Pulſe, in the middle of the night ſhe dyed.

A Learned Young Man, of a thin habit, and a pale Countenance, in the beginning of the Spring, not being conſcious of any errour in Diet, began to complain of a Laſſitude and a Debility in walking, alſo of a Drowſineſs of his Head, and a Sleepineſs: on the ſecond day he was withall tormented with a Thirſt, a loſs of Appetite, and a burning of the Præcordia; on the third day, a Phyſician being called, he took a Vomitory, after which when he had thrice vomited, and had voided five times by Seige hot and bilous Excrements, he became ſomewhat more cheerful, and the following Night ſlept indifferently well: on the fourth day he bled a little at Noſe: afterward the Thirſt and Heat were very much increas'd: the Urine was ruddy, with a copious Sediment and ſomewhat of an Hypoſtaſis: but becauſe after ſigns of Concoction in the Urine there appear'd an effort of Nature, oppreſt as it were, for voiding ſomething without a ſufficient Evacuation, therefore ſeven ounces of Blood were taken away, and thereupon he ſeemed to be very much relieved: Neverthleſs, in the Evening all things grew worſe, and thence forward for three dayes the Fever ſeemed ſtill to be rendred more intenſe, on the ſeventh day he complained of a great Drowſineſs in his Head, and of a Dimneſs in his Eyes: in the After-noon a very large Hæmorrhagie happened, that through the vaſt loſs of Blood the ſtrength of the Diſeaſed was almoſt wholly ſpent, and there was an extream need of phyſical aid for ſtopping the Blood: for this purpoſe, when Blooding in the Arm, Ligatures, Epithems applyed both to the Head and the lower part of the Belly, and a great many other Remedies (the inſtantaneous occaſion of Cure preſſing for it) preſcribed by all Perſons, were tryed in Vain; at length, by the perſuaſion of a Woman being there by chance, a red hot Iron was held to the Noſe as it dropt, and on a ſudden, upon the receiving of the Fume of the burnt Blood into the Noſtrills, its Flux was ſtopt: I have known this Remedy uſed ſince in many others with good ſucceſs: by that copious Hæmorhagy the continual Fever came to a Criſis; tho an intermittent Quotidian ſollowed it, which afterward was ſoon cur'd according to the Method above delivered.

A Matron ſixty years of Age, lying a certain night in Sheets not well dryed, began to be ill: firſt ſhe was affected with a ſuffocating Catarrh, that through the ſerous Maſs of filth diſtilling on the *Larynx*, ſhe could ſcarce breath, much leſs ſleep: the next day after ſhe had a Nauſeouſneſs and a want of Appetite, with ſomewhat of a Thirſt and an Exceſs of Heat: on the third day an acute Pain ſeized her ſide, with a Cough and an increaſe of the Fever, the Urine was ruddy, and clear, with a laudable

laudable Hypoſtaſis; the Pulſe was uneven and intermitting. A Phyſician being called, ten Ounces of Blood were taken away; alſo, on that day a Clyſter being giv'n, ſhe purg'd freely: about night the Pain vaniſh'd, and ſhe ſlept indifferently: the Urine then was ruddy, troubled, and filled with Contents. On the fourth day the Fever was ſomewhat more increaſt; in the Evening the Cough was very troubleſome, being followed with an acute Pain in the ſame Side as before; the Urine was clear again with an Hypoſtaſis: the Pain, upon letting Blood again, ſoon ceas'd. On the fifth Day the Fever was ſomewhat more remiſs; yet the Night was reſtleſs with a Heat and a Toſſing of the Body, but without Pain: the next Morning ſhe ſweated freely, and was relieved: afterward, by a thin Diet uſed for ſome Days, and being once purged, ſhe recovered without a Relapſe. It is worthy to be obſerv'd, that the Pain preſſing, the Urine was clear, and with an Hypoſtaſis; nor was it troubled by the Cold: which nevertheleſs, the ſame being appeaſed, preſently grew thick and more ruddy, and fill'd with Contents.

A robuſt Young-man, and well in Fleſh, about the Summer Solſtice, after immoderate Exerciſes, and then a ſudden Cold coming upon the Heat, fell ill. Firſt, he was affected with a loſs of Appetite, a Nauſeouſneſs, a violent Pain of the Head, alſo with a Thirſt, and a Heat more intenſe than uſual. On the ſecond day, an acute Pain in the Right-ſide, with a Cough and a difficult Reſpiration, ſeized him; Blood preſently being plentifully drawn from the Arm of the ſame Side, that Pain ſomewhat remitted; which nevertheleſs, returned more violently in the Evening, with a Cough and a ſpitting Blood; the night paſt without ſleep, and very reſtleſs. On the third day Blood was taken away again; and moreover, Liniments and Fomentations were applyed to the Side pained; Antipleuritick Powders, Juleps, and Decoctions, were inwardly taken: about night, the Pain, in a manner, wholly ceas'd; preſently after, the Diſeaſed was affected with a violent Head-ach, and a Vertigo. On the fourth day he bled two ounces of Blood at the Noſe; after which, that Affect of the Head clearly ceaſed; but in the Evening the Pain returned in the Side firſt affected, with a greater Fierceneſs: mean while the Pulſe was low and weak; that when it was conſulted concerning letting Blood, there was danger leſt the dejected Strength would not admit of ſuch a Remedy; wherefore, Blood being taken only in a ſmall quantity, it was preſcribed, that a Fomentation and Cataplaſmes ſhould be diligently applyed to the Side; moreover, that twenty Drops of Spirit of Hartſhorn ſhould be given in a Spoonful of a Cordial Julep, and that the ſame ſhould be ſtill repeated every ſix Hours: he ſweated plentifully that Night, and the Pain very much abated; the Spittle was but little, ſprinkled with Blood, which wholly ceas'd within a Day, the Pain alſo vaniſhing by Degrees: the Diſeaſed took twice a day a Scruple of the

the ſame Spirit of Harts-horn, and perfectly recovered within a few Days, without a Relapſe.

CHAP. XI.

Of the Malignant or Peſtilential Fever in general.

BEſides the Continual Fever, ſuch as above deſcrib'd, and which ariſes by reaſon of ſome Principle in the Blood exalted too much, and diſproportionate with the reſt; there is another Species of it, which is raiſed by reaſon of the Blood being tainted with ſome venemous Miaſm, and thereupon ready to incur various Coagulations and Corruptions; in which, not only the Spirit and the Sulphur, as in a Putrid Fever, make an exorbitant Effort, and force the Blood to boyl immoderately, but withal, the mixture of the Blood is forthwith diſſolved, and its Liquor runs into parts; and ſo that horrible Symptoms, with a manifeſt danger of Life, are cauſed in this kind of Affect. Under this Rank we comprehend *Malignant* and *Peſtilential Fevers*, the *Plague*, the *Small Pox*, and *Meaſles*; concerning which, it remains for us to treat at preſent.

By the unanimous Conſent of all, the Force and Power of theſe Diſeaſes are plac'd in a venemous Matter; becauſe, upon a Peſtilential Affect, even as upon drinking Poyſon, we find that the Strength is ſuddenly caſt down, and that Life is ſoon deſtroyed: and therefore, for explicating the nature of the Peſtilence, it will not be amiſs, firſt to enquire concerning Poyſon in general, and after what manner it affects our Bodies; and then to ſhew what ſort of Venom is diſperſt in the Plague and contagious Diſeaſes: which being premitted, we ſhall ſpeak in particular of the Affects even now mentioned.

We may juſtly give the name of Poyſon to whatſoever ſticking in our Body, violently and after a ſecret manner, injures the Temper and Actions of any part, or of the whole, deſtroys the Spirits, or perverts their Motions, diſſolves the mixture of the Liquors, cauſes Coagulations and Corruptions, ſubverts the Ferments and Functions of the Viſcera, and ſo on a ſudden, and privily, endanger Life. There is a vaſt ſtore of theſe in Nature, which are often engendred within our Bodies, and abundantly ſupply'd outwardly from the Earth, Air, and Water, and from the diſtinct Families of Minerals, Vegetables, and Animals.

As

As there is a great variety of Poysons, so there is no less a diversity of them, as to the Subjects, and the ways of their hurting; for, tho a great many poysonous things are said to be contrary to us, as to the whole Substance, so that they set upon any thing, and like a Funeral Flame, with a caustick Force reduce it, as it were, into Ashes: yet some of these, being endowed with a peculiar Force of offending, rather hurt one Part or Substance than another. The Subjects on which the Taint of the Venom fixes it self first of all, and most immediately, are two-fold, to wit, the *Animal Spirits*, or the spirituous and subtle Liquor passing in the Brain and *Genus Nervosum*, and the Blood flowing in the Heart and Vessels. When a disproportionate Object presents it self to one of them alone, or to both together, so that thereupon the Crasis of the Liquors or of the containing Parts, is subverted, whereby Functions necessary for performing the Offices of Life and Sense, are letted and this is done after a secret manner, and as it were on a sudden, these kinds of Effects we ascribe to Poyson.

The nervous Bodies, with the animal Spirit, are not set upon wholly after the same manner by all sorts of Poysons; for sometimes they are assail'd with a Stupor, sometimes with Cramps and convulsive motions, and those of divers Kinds and Conditions. The Bite of the *Tarantula* causes a Dancing; the force transmitted from a Tortoise by a Spear, or the Cords of a Net, stupifies the hand of the Fisher; the Roots of Wild Parsnips, or the Seeds of Darnel, eaten, make Men run mad; *Opium*, *Mandrake*, *Henbane*, and the like, cause a deep, and sometimes a mortal Sleep. These, and a great many other things, without any mighty Perturbation of the Blood, or Injury brought on the Heart, fast'n chiefly their Venom on the Animal Faculty or Spirit.

There are also some Poysons which chiefly insinuate their Malignity into the mass of Blood; wherefore, after using some Medicines, a yellow or black Jaundice, sometimes a Leprosie, leprous Affects, or Swellings of the whole Body, are produced; Vapours rising from subterraneous Vaults, also from Charcoals newly kindled, often suffocating the Vital Spirits, congeal the Blood withall, and stop its Motion; so that the Flame of Life cannot be continued in the Heart. Every Man may see how great a Corruption is communicated to the Mass of Blood from the pestilential Miasm, by the Spots and Pushes which are the infamous Marks, as it were, of the blasted Blood.

If the Injury first inflicted on either, *viz.* the œconomy of the Heart or Brain be light, for the most part it is brought to an end without any great Offence of either; wherefore, Convulsive Motions, a Stupor, Lethargy, Melancholy, Paralytick Affects, often begin with a laudable Pulse, and without an immoderate Effervescence of the Blood; and afterward, if the Affect does not wax strong, they come

to

to an end, and ceaſe by little and little. There are other Poyſons which often deprave the Blood, and corrupt its Mixture by diſſolving it, the animal Functions in the mean time continuing whole and ſound; but if the Ferment of the Poyſon be ſtronger, and lays deeper Roots, preſently the Venom is diſperſt from the one into the Province of the other; for when the nervous Parts are fill'd with a virulent Juice, a Portion of the Venom, brought back with the nervous Latex, by the lymphatick Veſſels into the Veins, is readily conveyed into the Maſs of Blood, and defiles it with the Corruption prevailing in it: alſo from the Blood greatly infected with Venom, the Juice wherewith the Nerves are irrigated in a ſhort time becomes tainted; Hence, Perſons that are mad are feveriſh, and ſuch as are ſeiz'd with a peſtilential Fever very often are aſſailed with a Delirium or Frenzy. Concerning theſe things, we muſt conſider what kind of Alteration or Impreſſion of Injury it is which is inflicted by Poyſon on the Animal Spirits with the Brain and nervous Appendix; alſo what on the Blood, with the Heart and the Veſſels annex'd to it.

As to the firſt, we obſerve, that that ſubtle Liquor, or the Animal Spirits, with which the nervous Bodies are influenced, and by the Expanſion of which, Senſe and Motion perform reciprocal Actions, are eaſily perverted from their Continuity, and even Expanſion; for, the Nerves being of a ſoft Texture, and the Spirits wherewith they are fill'd being of a very ſubtle Subſtance, they are not able to endure any ſorts of Objects that are ſtrong or vehement; wherefore, when any violent or diſproportionate Thing aſſails them by Surpriſe, they are often forc'd from their Expanſion and Excurſion, to a Flight and a Retreat, and often into Irregularities of motions; wherefore, ſudden Paſſions of the Mind diſtract them, and ſtir them to Twitchings and Convulſions: when the nutritive Juice wherewith they are ſupply'd is ſent to them too ſharp, acid, or auſtere, they undergo ſometimes Reſolutions, ſometimes Shrinkings: and if ſome Object more contrary (ſuch as we affirm Poyſon to be) preſents it ſelf, whoſe Particles are of ſuch a fierce Nature, or of ſuch a Configuration, that they violently ferment with the nervous Liquor, they ſtrongly drive the ſubtle or ſpirituous Part of it this way and that, or wholly drive it away; and either by their ſtyptick Force they fix the reſt of the Liquor, or force it by an Ebullition into diſorderly Motions; Hence neceſſarily ariſe the evil Affects of the Brain and nervous Parts, *viz.* ſometimes a Convulſion, a Trembling, a Shivering, ſometimes a Stupor, or Reſolutions, and other ſevere Symptoms. The Things which infect with Venom the nervous Juice after this manner, ſometimes are groſs, and only inflict their Injury when they are applyed in a very corporeal Subſtance; ſometimes they are ſubtle, and being reſolv'd into a Vapour, or even to a Breath, they diſperſe the Ferment of the Poyſon from a little Point throughout the whole *Genus Nervo-*

ſum. Sometimes the Poyſon of an ill Thing eaten firſt begins its Tragedy in the Stomach, but oftner by a bare Contact on the Surface of the Body, it leaves the virulent Miaſm, which ſoon and readily defiles, with its Ferment, the Spirits diſpers'd through the whole. A Taint inflicted on the Extremities of the Nerves, any where, whether inwardly or outwardly, is diſpers'd to a diſtance by their ready Conveyance, preſently many Sprouts of the ſame Branch being brought to communicate of the Evil. Often, a light Touch of a venemous Thing by the Finger, or the extream part of any Member, preſently conveys the Taint received to the Brain, and thence it is retorted on the whole Body, and the moſt remote Members: the Reaſon of this is, that the Particles both of the nervous Juice, and of ſome venemous Miaſm, are ſo active and quick of Motion, that either of them paſs moſt ſwiftly through the whole Maſs of the other, as Rays of Light through a Diaphanous Medium.

2. As often as the Blood gets Miſchief by a venemous Thing, the Venom ſticking in it, either is dull and of leſs Activity, which does not preſently diſcover it ſelf, nor breaks forth into terrible Symptoms, till after a long time, when it is brought to a Ripeneſs by a tacit Fermentation, and has firſt infected the whole Maſs of Blood; as we may obſerve in ſome Poyſons, which are ſaid to kill at a diſtance, and not but after ſome Months or Years: or the Poyſons inſpired into the Blood are imbued with a much ſharper Sting, that the Taint contracted by their Contagion preſently breaks forth into terrible Symptoms; and thereupon follows ſometimes a feveriſh Efferveſcence, with a Vomiting, a Thirſt, and a burning of the Præcordia; ſometimes a puffing up of the whole, a diſcolouring of the Skin, often an Eruption of Puſhes and Buboes; frequently alſo a ſudden falling of the Strength, ſo that a ſudden Death ſteals on without any Stir, and almoſt unperceiv'd: where it is to be noted by the By, if the Spirits of the Blood provok'd by the Enemy, are able to ſet upon him and to contend for the Victory, from this Conflict a feveriſh Ebullition is rais'd in the Blood; but, if the Particles of the Poyſon far exceed them in Strength, preſently the Maſs of Blood is corrupted, that it can neither be circulated in the Veſſels, nor be duely kindled in the Heart.

If it be farther enquired, what Changes in its Subſtance, or Conſiſtency, the Blood infected with Poyſon undergoes, that thereby it is rendred unfit for the Support of Life; I anſwer after this manner, Some Poyſons fuſe the Blood, and precipitate its Seroſity, as thoſe Medicines which being deſtructive either by Purging, or by cauſing a Flux of Urine, or by a puffing up of the whole, or by a Diſcolouration, or an Eruption of Puſhes, make a very great Separation of the Serous Latex: mean while, a great ebullition is cauſed in the maſs of Blood, whereby the Vital Spirits are greatly ſpent; the Particles of

the

the Salt and Sulphur, by the too much Coction, are exalted, and often ſo ſcorch'd, that a Jaundiſe, either yellow or black, is cauſed.

There are Poyſons of another kind far more dangerous, which congeal the Blood, and corrupt its mixture by deſtroying it, *viz.* firſt they bring a Coagulation on the Maſs of Blood, and then a Corruption; for, when the Spirits of the Blood, put to flight by the Contagion of the Poyſon, are diſſipated, the even mixture of the Liquor is diſſolved; wherefore, the groſſer Particles mutually lock with each other, and (like Milk upon Rennets being put into it, or turning ſoure of its own accord) they are coagulated together; hence the Blood grows clotted in the Veſſels, that it is not readily circulated in them: the coagulated Portions of it being convey'd inwardly into the Sinus's of the Heart, are there apt to ſtagnate, and ſo they cauſe frequent Faintings and Swoonings: being carried outward, and ſtuck in the Skin in circulating, ſometimes, when caſt on every ſide in a plentiful manner, they cauſe an over-ſpreading of Blackneſs throughout the whole; ſometimes being diſperſt more ſparingly, they cauſe only Spots, or black and blew Marks, and the reſt of the Phœnomena of Malignity: now the Coagulation of the Blood ſoon diſpoſes it to Putrefaction or Corruption, as it is to be ſeen in extravaſated Blood, which ſoon turns black, and is wont to putrefie; for the Spirit being exhal'd, the remaining Particles of the Salt and Sulphur in the Blood begin to ſeparate from each other, and to diſſolve the Bond of Mixture, whence Putrefaction enſues.

Theſe things being thus premitted concerning Poyſon in general, the method of Healing requires that we ſet upon the Tract of Fevers, which draw their Origine wholly from a venemous and malignant Miaſm: and ſince among theſe, the *Plague* is undoubtedly the chief, I ſhall begin with the Conſideration of that, and ſhall ſpeak afterward, in order, of *Malignant Fevers*, the *Meaſles*, and *Small-Pox*. But before I give its Definition, I ſhall enquire briefly concerning the Peſtilential Venom, of what Nature and Diſpoſition it is; alſo whence it ariſes; and laſtly, after what manner it is propagated by Contagion in others.

The Eſſence of the Peſtilential Fever is founded in a vapory and ſpiritual Miaſm, from which Effluvia's diffuſed on every ſide ſo powerfully diſplay themſelves, that from the leaſt Seminary they ſoon propagate a fertile Harveſt of Death and Deſtruction. By reaſon of its mighty Activity, this Miaſm deſerves to be called, a certain Quinteſcence, as it were, of Poyſon: its very nimble and ſubtle Particles penetrate all Bodies, and inſpire them with their Ferment; for, whether being diſpers'd through the Air, or ſtored up in ſome Fomes, if they come to hit upon a Humane Body, tho it be lightly, and as it were, with a Glance, they readily penetrate it, ſoon infect the Animal Spirits and thoſe of the Blood, and thereby overſpread all the Members with a Venemous Contagion.

When a peſtilential Breath or Vapour has aſſailed any one, and that Venom has firſt ſeiz'd the Animal Spirits, or thoſe of the Blood, or both of them together; from the ſubtle and thin Subſtance of theſe the Taint is ſoon derived into the groſſer Matter, for in a ſhort time it ferments the whole Maſs of Blood, or nervous Juice, and the excrementitious Humours in any place abounding; and thence is drawn into the ſolid Parts, and fixes the Evil in them. If this Contagion firſt ſeiſes the *Animal Parts*, preſently the Injury is communicated to the Brain, and the *Genus Nervoſum*, and eſpecially to the Ventricle; it forthwith poyſons the Humour lodging in theſe, diſſolves its mixture, perverts its regular Motion, and renders it wholly diſagreeing and offenſive to the tender ſubſtance of the containing Parts: thence forthwith Cramps, and Convulſive Motions, violent Vomitings, a Cardialgia, alſo a Frenzy, Delirium, or obſtinate Watchings, are raiſed about the firſt Invaſion of the Diſeaſe; whereas in the mean while, the Taint being not yet diſperſt through the Blood, the Diſeaſed are not in a Fever, nor infeſted with a diſorderly Pulſe, or a Swooning, or an appearance of Tokens; which Symptoms, nevertheleſs, aſſoon as the Blood is infected, ſhew themſelves afterward. If at any time the *Spirits of the Blood* are firſt ſeiſed with the venemous Miaſm, either breathed in with the Air, or attracted by the Pores, by and by its ferment is diſperſt throughout the whole maſs of Blood, the infected portions preſently begin to be looſned from their even mixture, to ſeparate into parts, and to be coagulated, and the ſame being conveyed into the Sinus's of the Heart, to ſtagnate there, and to cauſe a Swooning, Faintings, and often a ſudden Death: alſo being carried outwardly, and fixt about the Skin, they are wont to cauſe Bubo's, Puſhes, and the other marks of a Venenoſity, mean while the Diſeaſed are preſent enough to themſelves, and are not aſſail'd with a Delirium or convulſive Motions: but if from a ſtronger cauſe an Injury be inflicted on both Parts at once, the courſe of the Diſeaſe is carried on with a more horrible appearance of Symptoms, and with a Phrenſy infeſting together.

As to what regards its riſe; when the Plague firſt ariſes in any Region or Tract of the Earth (whatſoever others may think) we place the firſt and chief natural Seminary of this Poyſon in the Air, for it ſeems conſonant to reaſon, that from the ſame Fountain from whence the Food of common Life is derived, the beginnings alſo of Death, which is no leſs diffuſed, ſhould be taken: the ſame neceſſity lies upon us for breathing the Air, as for Fiſh of living in the Waters; wherefore, as the common Deſtruction of Fiſh dying in Multitudes is aſcribed to Waters being infected with Poyſon, ſo nothing but a Taint of the Air, breathed by all, can kill Men that dye without a manifeſt Cauſe, by an epidemick Deſtruction.

For the Air, which we neceſſarily breath in for the Support of Life, conſiſts of thick Steams and Vapours, which continually are breathed from

from the Earth; to which the exhalations of Salts and Sulphurs being mixed, they make here a thick Fog, as it were, of Atomous Corpuſcles. The Motions of theſe being both very ſwift and reſtleſs, are of a manifold and very differing Figure; wherefore ſome of them continually encounter others, and according to their various Configurations, they cloſe with theſe and are mutually combined, and are driv'n and fly from others: on this the Reaſons of every Sympathy and Antipathy chiefly depend; from the divers Agitations of theſe kinds of Atomes near the Surface of the Earth, this or that Tract of the Air undergoes divers Alterations, with which Bodies, eſpecially thoſe that are living, are variouſly affected, for the inward Motion of the Particles of each Animal depends very much on the motion and temper of the Particles of the Air: Since theſe continually exagitate thoſe, ſtir them up when they are drowſie, repair the Loſſes of thoſe that fly away, exagitate the vital Flame with their Nitroſity, and ſupply it with a nitro-ſulphureous Food, and eventilate it being kindled by the continual Courſes of Acceſſes and Receſſes: as long as an apt Contemperation happens for the Motion and Configuration in both, Animals enjoy a perfect Life and Health; but if the Corpuſcles flying in the Air are of ſuch a kind of Figure and Power, that they are manifeſtly contrary to the Spirits implanted in Animals, they looſen the mixtures of theſe from the reſt of the Elements with which they are bound, and pervert their Motions: hence the Craſes of things are deſtroyed, Life is overthrown, and that being ſcarce extinct, the Bodies incur Putrefaction; hence the Tops of Trees or Corn being ſtruck with a Blaſt wither on a ſudden; hence the Murrain oftentimes reigns amongſt Cattel, which kills whole Herds together. For this kind of Cauſe the Seeds of the Peſtilence firſt exert themelves, and threaten a univerſal Slaughter of Mankind; for even as venemous Corpuſcles gathered together in the Bowels of the Earth, or on its Surface, produce Arſenical Mixts, or venemous Herbs; ſo theſe being reſolved into a Vapour, and gathered thick together in the Air, create pernicious Blaſts, from which malignant and peſtilential Diſeaſes ariſe: and it ſeems to me not improbable, that the things which firſt give a ſeminary of the Peſtilence to any peculiar Tract of the Air, are the venemous Effluvia of Salts and Sulphurs grown exorbitant, and breath'd forth of the Bowels of the Earth; which ſometimes, being firſt long included in the Earth, are exhal'd by degrees; ſometimes, by reaſon of Tremblings or Openings of the Earth, break forth together; of which kind alſo there are generally breath'd from the Tents of Souldiers filled with Naſtineſs, by reaſon of dead Carcaſſes lying unburied, or from places fill'd with ſtagnating and ſtinking Mud. And Corpuſcles exhaled after this manner, by a long Putrefaction, acquire to themſelves wonderful Powers and Diſcongruencies, that thereby they are diſagreeing and heterogeneous to all others whatſoever; and ſo being received into

to the Air, they ferment it (like a maſs of Liquor) and pervert it from a wholſome and benign into a pernicious and curſt Nature.

Some Bodies eaſily receive the malignant Tincture of a peſtilential Air, others not ſo readily; thoſe who have a very great Cacochymia by reaſon of an ill Dyet, and thoſe who by reaſon of a Plethora have a Blood filled with an inflamable Sulphur, a light Blaſt of a venemous Air faſtens the peſtilential Venom on them, eſpecially if they lye under a Fear and Sadneſs, which convey inwardly the lighteſt Parts of Contagion, as it were by a certain Infuſion. On the contrary, thoſe who have the Viſcera clean, and the Maſs of Blood well tempered, and thoſe who carry a ſtrong and undaunted Mind, do not ſo eaſily receive this Infection; and ſometimes being receiv'd they expell it again.

So far of the Peſtilence and its Communication, according to its firſt Being, and the Source of the infected Air thence drawn; it remains for us to ſpeak of its Propagation by Contagion, as it is often communicated from ſome Men to others, as it were *ex traduce*.

By Contagion we underſtand that Force, or Action, whereby any Affect being in one Body ſtirs up the like to it in another; but ſince this happens either immediately by Contact, as if any one lying in the ſame Bed with another Man ſeiz'd with the Plague, gets the ſame Diſeaſe; or mediately, and at a diſtance, as if it happens that the Contagion be convey'd from one Houſe to others at a diſtance; and ſo if the Plague aſſails any Perſon handling a Garment or Houſhold-ſtuff of an infected Houſe, after ſome Days, or Months, or haply Years: therefore, that the nature of a Contagion, and the divers manners of it, may be plainly known, let us examine firſt, What that thing is which flows from an infected Body: ſecondly, How it is diſpoſed in the medium through which it paſſes: thirdly, After what manner it engenders an Affect like it ſelf in another Body.

1. That from every Body, though of a fixt Nature, Effluvia's of Atoms conſtantly flow, which make, as it were, a miſt or cloudy Circle about them, and inveſt them, as it were, like the Down of a Peach, it is ſo receiv'd a thing among the ſoundeſt Philoſophers, that there is nothing more; and the more active Particles any thing conſiſts of, by ſo much it ſends from it Corpuſcles of a more notable Vertue, and Energy: hence the Effluvia which part from Electrick Bodies, are able to move other Bodies from their Places; from Sulphurs Emanations paſs, which fill the whole Neighbourhood with Odours: ſince therefore the peſtilential Venom, as is ſaid before, tho in a ſmall Bulk, is of a mighty Efficacy and Operation, whereſoever it is fixt, certain Emanations neceſſarily proceed from the Bodies imbued with it, which carry the nature of the ſame Poyſon and Malignity, and diffuſe it on every ſide according to its Sphere of Activity: but ſince theſe Corpuſcles which retain the Contagion of the Peſtilence, when they flow from one

one body, are not presently received by another, let us inquire how they are disposed in respect of their passing through the Medium.

Where presently occurrs the difference of them from most others, in regard that the Effluvia, which generally evaporate, do not long retain the Nature of the body whence they flow, but either vanish in the tenuated Air, or closing with other bodies, are assimilated with them: but those Particles which part from a pestilential Miasm, are not easily absorb'd by the Air, or other Body, so that they wholly perish; but among various Confusions of Atomes, and Dashings against other bodies, they preserve themselves entire: for this Poyson being in a manner masterless, and insuperable by others, continues still the same; and tho it consists of a very small heap of Atomes, it does not presently vanish, but taints with its Ferment the next Corpuscles to it, and so acquires to it self new Stores, and gets Strength as it goes; whence it lies long hid in every Fomes, and after a long time, when it has lighted on a fit Subject, it exerts it self, and communicating the Infection of its Venom to the other, it resuscitates a-new the Disease of the Plague, which before seemed to be driv'n away, and tho from a very small Seminary, it disperses its mortal Poyson far and near.

For the Plague discloses such most certain Signs of its Contagion, that some Authors affirm it to subsist among Mortals only by this means, and that it no where arises a-new, but is preserv'd only by a Fomes, and that it is now and then conveyed from one Region into another. Histories tell us, that the Seeds of it have lain dormant for many Years in a Garment or Bed-Cloaths, that upon the same afterward being stirr'd, they have shewn themselves, and have brought the Disease of the Pestilence, arising a-fresh, with a mighty Destruction of Mankind: when by reason of a Fomes the Pestilence is propagated to a distance after this manner; the venemous Corpuscles which remain in the Miasm, being stirred, presently spring forth, and display their Venom on every side, as it were by a certain Irradiation: if they any where light on a humane Body, they presently seise the Spirits, and are conveyed inward by their Vehicle, and then easily enough infect the Blood, and all other Humours flowing in the Vessels with their Ferment, and in a short time cause Coagulations and a Putrefaction in them. And after this manner, by most subtle Effluvia, there is made a certain Transmigration, as it were, of the pestilential Disease, ev'n as when a graft cut from some Tree, and laid aside for some time, and afterward inserted in another Trunk, is able, though from a very small Bud, to produce a Tree of the same Kind and Nature.

CHAP.

CHAP. XII.

Of the Plague.

THE *Plague* may be described after this manner, That *it is an Epidemious Diſeaſe, contagious, very deſtructive to Mankind, taking its Riſe from a venemous Miaſm firſt received by the Air, afterward propagated by Contagion, which ſetting upon Men after a hidden and ſecret manner, cauſes Extinctions of the Spirits, Coagulations of the Blood, Syderations and Mortifications of it, and of the ſolid Parts, and brings the Diſeaſed in danger of Life, with an Appearance of Puſhes, Bubo's, or Carbuncles, and with the addition of other horrible Symptoms.*

There are a great many Signs occurring to us, which fore-ſhew that the Peſtilence will happen in a ſhort time, to wit, if the Year does not keep its Temperament, but has immoderate and very unſeaſonable exceſſes of Heat or Cold, Drought or Moiſture: if the Meaſles or Small Pox are every where very riſe, if Phlegmons, or Bubo's accompany reigning Fevers; from a preceeding Famine a moſt certain Preſage is taken of an enſuing Plague; for the like Conſtitution of the Year which for the moſt part brings a Dearth of Proviſions, by reaſon of the Corn being blighted, is apt alſo to produce a Plague; alſo the evil ſort of Dyet, which ſuch as are preſt with Hunger make uſe of, eating all kinds of unwholſome things without choice, diſpoſes their Bodies more readily to receive the Contagion. Moreover Earth-quakes, and freſh-opened Grotto's and Caverns upon the cleaving of the Earth, by reaſon of the Eruptions of a malignant and venemous Air, have often given Beginnings to Plagues. Again, as there is need of great Diligence in taking a fore-view as it were, from a Watch-Tower, of an imminent Plague, ſo we ought to be no leſs ſagacious in obſerving the ſame as it firſt ariſes, and caſt its firſt Darts; for often, being too ſollicitous, we dread even vulgar Fevers, if haply they end in Death, for this Contagion; and ſometimes being too ſecure, contemning the Peſtilence by reaſon of its Symptoms reſembling thoſe of a common Fever, we find our Dangers but too late: wherefore, for the fuller knowledge of this Diſeaſe, we ſhall ſet down its Signs and Symptoms both common and pathognomick.

Beſides the Signs above delivered, which by a certain Demonſtration, *a Priori*, give a Suſpicion of an enſuing Plague; there are others whoſe concurrence with it plainly ſhew its Preſence in a Body diſeas'd: of theſe ſome are common to a Plague with a putrid Fever, ſome are more proper to this Affect; for the Impreſſion of the Plague oftentimes ſtirs up an Effervescence of the Blood, and has a Fever ſo fre-

frequently joyn'd with it, that by ſome, in the Definition of the Plague, the Fever is put as a *Genus*; wherefore, by reaſon of the Ebullition of the Blood, and the Injury brought on the Viſcera, preſently an Incaleſcence with a ſpontaneous Laſſitude, a Thirſt, a burning of the Præcordia, Vomitings often violent, a Cardialgia, Gripes in the Bowels, a Roughneſs or Blackneſs of the Tongue, a Swooning, and a ſudden Fall of the Strength, enſue. Tho vulgar Fevers are oftentimes attended with theſe kinds of Symptoms, yet if at the ſame time a Plague be rife in the Neighbourhood, and a fear of the ſame ſeiſes the Minds of Men, hence a greater Suſpicion of this Evil is given; and eſpecially, becauſe, when a Plague reigns, all other Diſeaſes leave their own Nature and paſs into that: wherefore, if to the Affects even now mentioned, there be added a Communication of the ſame Diſeaſe to many, and many dye of it, ſo that it generally becomes mortal and ſpreads it ſelf; and if beſides, Buboes, Carbuncles, Puſhes, or others Marks of a peſtiferous Contagion appear, the thing is put without doubt, and we hence proclaim a Peſtilence, with no leſs Confidence, than we do a Fire when we ſee a Flame burſt forth through the Roofs of Houſes: but becauſe a mention is here made of Buboes, Carbuncles, and other Symptoms, it remains for us to give briefly the Cauſes of them, and the ways of their being produc'd; they are theſe, a Carbuncle, Bubo, Puſhes, Wheals, and malignant Puſtules.

Concerning theſe, we ſay in general, that they are all Products of the Blood, and nervous Juice, ſtruck with a peſtiferous Venom, and coagulated by Parts in their Circulation, and variouſly affected with Putrefaction; for the Spirits reſiding in both Liquors, eſpecially in the Blood, are no ſooner touched with the breath of a malignant Contagion, but a Coagulation is cauſed in the remaining Liquor, even as when Milk turns ſour, or has an acid Juice mixt with it: wherefore, Portions of it being greatly tainted with Venom, ſoon grow clotty, and like extravaſated Blood, fall into a Corruption with a Blackneſs; whence preſently they ſtop the Motion of the reſt of the Blood in the Heart and Veſſels, and coagulate it more by reaſon of their Ferment. Now whatſoever is gathered together into Clots by Coagulation, unleſs it be preſently caſt forth, brings Death in a ſhort time, by ſtopping the Circulation of the Blood; and being driven outward to the Circumference of the Body, is ſtopt in motion in the narrow Involutions of the Veſſels; and either being wholly deſtitute of Spirit, as tho it were Planet-ſtricken, it produces black or blew Marks by its Mortification, or by reaſon of the Salt and Sulphur exalted by the peſtilential Ferment, and affecting new things, it grows into Tumours of various kinds.

A *Carbuncle* is a fiery Tumour, with very ſmart and burning Puſtules about it, infeſting the Diſeaſed with an acute Pain; which ariſing in

various places indifferently, does not ſuppurate, but ſpreading largely round about, burns the Fleſh, and at length throws off lobes of it being corrupted, and leaves a hollow Ulcer, as tho burnt by an Eſchrotick.

The Generation of Carbuncles ſeems to be after this manner; when venemous Miaſms light on a Blood parch'd with Heat before, its congeal'd Portions are fixed in the Superficies of the Body; and at that place, becauſe the motion of the Blood is a little letted, firſt a little Tumour is made, which afterward, the malignant Venom preſently ſpreading it ſelf farther, being increaſt by little and little, creeps into the Neighbourhood. Suppuration does not follow, becauſe the matter extravaſated, and ſtagnating, is not concocted and digeſted with a gentle heat, but by reaſon of the Particles of the Sulphur, grown exorbitant together with the Salt exalted, being heap'd together into theſe Tumours, and by reaſon of the Stagnation being forthwith diſſolved from mixture, an Aduſtion is caus'd, as if a Cautery were applied to the part: the pieces and lobes of Fleſh, eaten as tho covered with an Eſchar, fall away, becauſe the corroſive Venom ſticking to the Muſcles, does not corrode them only in their Surface, but through their whole Subſtance; wherefore, before the whole Fleſh is conſumed, the Membranes in which it is involved being eaten away, ſome pieces fall from the reſt as tho cut from it: often one, often more Carbuncles ariſe; ſometimes they are alone, ſometimes they have a Bubo accompanying them.

A peſtilential *Bubo* ariſes only in glandulous parts; toward the bulk of which, not only the Blood congeal'd by the Venom, and carried thither by the Arteries, but alſo the nervous Juice there heaped together, and to be carried back into the Veins, contribute. Becauſe this Tumour happens from Juices leſs parch'd, and in a colder part, therefore it partakes of Suppuration; for, the Matter heaped together by degrees when (the vital Spirit departing by reaſon of Stagnation) it has loſt the Form of Blood, through the Particles of the Salt and Sulphur being exhaled, and kept in the Tumor, is converted into a Pus by long Concoction. Now that theſe Tumours only happen in the Glands, the Reaſon is, not that the Fewel of the Diſeaſe is conveyed to theſe parts by a certain Appointment of Nature, but as the Particles of the virulent Miaſm abound every where in the Blood and nervous Juice, they are heaped together there more readily, as in a common place of Retreat, where both the Blood conveyed to the Extremities of the little Arteries, is with difficulty and not ſo readily received and carried back by the Veins, and withall, where the nutritive Juyce, to be carried back from the Nerves into the Veins, is depoſed. That both of theſe are done about the Glands, it is manifeſt, both by Experience & late Anatomical Experiments; wherefore, ſince both Humours filled with the Seeds of the peſtilential Contagion

tagion met together in these Parts, a seat of Malignity is here made by reason of the Virulency deposed here by both.

Pushes, *Wheales*, and *Purple Spots*, in respect of the Venenosity, are of the same Batch with the Tumours even now described; but in these the Products of the Virulency are less in bulk, tho with a greater danger, by reason of the Seeds of the Venom being more dispersed: small Portions of coagulated Blood sticking in the Skin, make these lesser Phœnomena; wherefore, some of these, rais'd into Bladders, suppurate; others, by reason of a certain Mortification or Syderation of the corrupted Blood, turn into Purple Marks and Spots.

Tho the Plague, by reason of the Destruction wherewith it threatens the Diseased, both secretly, and very much on a sudden, scarce affords Place or Time for a Prognostick; and tho by reason of the occult ways of doing Mischief, this Disease carries all things suspected in it; yet it is manifest, by frequent Observation, that some Signs appear in the Course of it, from which we are wont to divine a Recovery or Death. The Case is full of Danger if the Contagion suddenly passes into an universal Sickness, and makes violent Invasions; if an Hæmorrhagy, or only a small Pain happen in the beginning of the Disease; if the Urine be thick, and troubled, the Pulse unequal and weak; if a Convulsion or Frenzy presently follow; if the Vomitings, or Stools, are livid, black, or very stinking; if the Pushes at first red, afterward turn black and blue; if the Carbuncles are numerous, if the Buboes first arising, disappear; if the Strength be cast down on a sudden; if the Countenance looks dismal, or turns black and blue; if with a cold Stiffness of the extream Parts there be a burning of the Viscera, especially if these or most of them happen in a Body very cacochymical, or in an unwholsome Season. On the contrary, the Diseased are bid to be of good Courage, if the state of the Pestilence be lighter, and less dangerous; if the Disease happens in a sound and robust Body with a Fortitude of Mind; if Remedies are seasonably administred before the Disease has seised the whole Mass of the Blood; also, if the Course of the Disease goes on with a constancy of the Strength, a Vigour and Evenness of the Pulse, a Suppuration of Buboes, and a large Discharge of Pus, and with the absence of horrible Symptoms: mean while, tho we may hope here all good, yet it is not free for us to be secure, because sometimes, with a laudable Appearance of Signs, Ambushes are privily laid for Life; and, as from a reconciled Enemy, we suffer most severely, when we seem'd to have escap'd his raging Threats.

In the Cures of most Diseases, the chiefest Work is committed to Nature, to whose Failure Physick gives a helping hand: and the Office and Science of a Physician chiefly consists in this, To wait fit Occasions of giving Aid to her, when she is at a Fault. But the Plague has this peculiar, that the Cure of it is not to be left to Nature, but we

muſt fight againſt it always with Remedies taken from Art; nor muſt we be here ſollicitous of a more ſeaſonable, and as it were, a milder Time: but we muſt get Medicines aſſoon as may be, and inſiſt on them at all Hours, and almoſt Minutes. But, becauſe when a Plague reigns there is need of no leſs care for driving away the Contagion, than that the Contagion receiv'd, be cured: therefore a Phyſician has a double Task; to wit, both that he take care for the Prevention of this Diſeaſe, and for its Cure.

Prophylactick Cautions either regard the Publick, and belong to the Magiſtrate, or private Perſons; by which it is taught what muſt be done by each Man when a Plague is feared.

The publick care, in a time of the Plague, chiefly conſiſts in theſe things; That Divine Worſhip be duely obſerved; that all Matters maintaining Putrefaction be taken away; that Filth, Dunghils, and all ſtinking Things, be removed from the Streets, and every occaſion of Contagion be moſt diligently avoided; that Commerce with infected Places be forbidden; and that a wholſome kind of Diet be conſtantly kept to by the Citizens; let the Poor, who have not a plenty or choice of Proviſions, be fed at publick Charges. If the Plague be already grown riſe, let the venemous Force of the Air be corrected as much as may be, which will excellently be purg'd by a frequent burning of ſulphureous things: let the infected be ſeparated from ſuch as are ſound, and let theſe keep from their Carkaſſes or Houſhold-ſtuff. Laſtly, let skilfull and meet Phyſicians and Attendants be gotten to ſupply the Wants both of thoſe that are in Health, and of the Diſeaſed.

The Rule of a private *Prophylaxis* is wont to be concluded in theſe three things; viz. *Diet*, *Pharmacy*, and *Chirurgery:* The *Diet* regards the ſix *non-natural* things, amongſt which, thoſe of chiefeſt Note are the *Air*, and the *Paſſions of the Mind:* as to the reſt, the Precept of *Hippocrates* ſuffices, *viz.* that *Labour*, *Meat*, *Drink*, *Sleep*, and *Venus*, all keep a mean: let the Peſtilential Air either be avoided by removing into another place, or let it be corrected by ſulphureous things duely kindled, or let it be refreſh'd in breathing by Fumes and odoriferous things frequently held to the Noſtrils: As to the Paſſions of the Mind, Fear and Sadneſs, whilſt a Peſtilence reigns, are as a ſecond Plague; for, by theſe the ſeeds of the venemous Contagion, which lye on the Superficies of the Body, as it were in the outmoſt Margin of the Vortex, are violently drawn inward, and deliver'd to the Heart; wherefore, a cheerful and confident Mind is better than the moſt exquiſite Antidote. I have known many, who were wont to ſay in the Words of *Helmont*, That *by fortifying the Archeus with Wine and Confidence*, and uſing no other Alexipharmicks, they paſt their Time among infected Perſons without any injury by Contagion; and thoſe who liv'd otherwiſe, imbib'd the Seeds of the Peſtilence, as tho deriv'd from the Stars.

Among

Among Chirurgical Things to be uſed for Preſervation, *Blooding*, *Cauteries*, and *Amulets*, are uſually recommended: where there is a *Plethora* with a great Turgeſcency of the Blood, or when by a long Uſance Perſons have accuſtom'd themſelves to be let Blood, opening a Vein agrees with them; for, by how much the leſs the Blood boyls, and is circulated in the Veſſels without trouble, by ſo much the ſlower is it infected with the venemous Contagion. Iſſues made by Cauteries are ſo much approved of by the Suffrages almoſt of all Men, for Preſervation againſt the Plague, that their uſe is generally receiv'd among the Vulgar; for theſe conſtantly drain the aſſiduous encreaſe of the excrementitious matter: and if any Miaſms of the Peſtilence are inwardly admitted, they caſt them forth by their open paſſage.

Amulets, hung about the Neck, or worn about the Arm-Wriſts, are thought to have a wonderful Force againſt the Peſtilence: of theſe the moſt excellent are accounted by ſome, which conſiſt of Arſenick, Quickſilver, the Powder of Toads, and other venemous Things: that the ſame do good in ſome Caſes, beſides the Obſervations of Phyſicians, this Reaſon ſeems ſomewhat to convince; the Effluvia, or atomous Corpuſcles which ſometimes flowing from certain Bodies, ſometimes ſettling on others, fly about the whole Region of the Air; theſe being diverſly figur'd, ſome of them excellently cloſe with others; but if they jut againſt Corpuſcles of another Form, they enter a Conflict with them, and ſubvert them; hence the Particles of the peſtilent Miaſm, which are contrary to our Spirits, excellently agree with thoſe Corpuſcles of the Poyſon coming to them, and readily cloſe with them: wherefore Amulets made of Poyſon do this; to wit, they gather into themſelves the Seeds of the Peſtilence coming againſt us, by reaſon of a Similitude of Parts; nay, and by drawing the ſame from our Body to their Embraces, they in ſome ſort free the Infected from the Malignity.

The Pharmaceutick Prophylaxis has a double Scope; firſt, That the aſſiduous Increaſe of the excrementitious Matter, or Humours, be remov'd by a gentle Purge as often as there is need: ſecondly, That by Alexipharmicks daily taken, the Spirits and our Bodies be fortified againſt the Incurſion of the Venom: by the former, the Food and Fewel which increaſe the Putrefaction cauſed by the Venom, are withdrawn; by the other, the firſt kindling of the peſtiferous Contagion, as it were of a funeral Flame, is hindred: for Alexipharmicks ſeem to give help againſt the Contagion of the Peſtilence under this two-fold Reſpect; both becauſe the Maſs of Blood, and the Viſcera fill'd with the particles of theſe, alſo the Spirits being firſt poſſeſt by the ſame, do not eaſily admit the Fellowſhip of the venemous Miaſm, and for that the Blood being quick in its Motion by the gentle Inſtigation of theſe Particles, is freed from Coagulation.

So

So far of *Preservation*: it remains now for us to treat of the *Cure* of the Pestilence; the Doctrine whereof is either general, and comprises the Remedies which are taken for this end from Diet, Chirurgery, and Pharmacy; or special, which delivers the use, and cautious concerning the giving of those Remedies, and after what manner we must obviate Symptoms variously emerging.

The Diet comprehends the use of the six non-natural things, tho the chief Care and physical Cautions are concerning the Food; the primary Indications of this have not place together, and at the same time, but ought to be supply'd as occasion requires, now one, now another, and according to the Exigency of Nature. In respect of the Malignity and the Dejection of the Strength, Aliments are required, which greatly refresh the Spirits, and afford a plentiful Nourishment: in respect of the feverish Distemper, a Dyet seems to be required which is thin, cooling, and qualifying of the Blood. Let a Physician take care of both; but let him direct his Remedies rather against the Malignity than against the Fever.

The Aids which belong to Chirurgery are Bleeding, which ought to be used seldom, and with great Caution in this Disease, because the Blood being too much exhausted, and the Vessels falling, a Sweat is not so easily procur'd; the place of this is better supplyed by Cupping-Glasses with a Scarification; for this, and Vesicatories are aptly used for drawing forth the Venom. Moreover, against Buboes, Carbuncles, and malignant Ulcers produc'd by them, Cataplasms, Fomentations, Plaisters, Liniments, and many other things, to be apply'd outwardly, are taken from Chirurgery, with which some poysonous things, as Drawers of Venom, are prescribed to be mix'd by some: wherefore, Preparations of Arsenick, *viz.* its Oyl, and Balsam, are recommended in this Case, as of excellent Use and Efficacy.

Medicines, in order to the Cure of the Plague, are either Evacuatives or Alexipharmicks. The Intention of the first is, that the Serous Latex in the Blood, and the excrementitious Humours, which abound in the Viscera, be sent forth; and together with them, a great many Particles of the venemous Miasm every where dispers'd in the Body. Now these things are perform'd by Vomitories and Purges, whose use is rare, and only in the beginning of the Disease; also by Diaphoreticks, which at all times, as long as the Strength is able to bear them, are indicated in the Plague: for these evacuate more fully, and withal from the whole Body, and also by exagitating the Blood, they free it from Congelation, and in regard they move from the Center to the Circumference, they drive the venemous Ferments, and also the Corruptions of the Blood and Humours far from the Heart, and repell the Enemy from the Fort: but Vomitories and Purges evacuate less generally, and often by concentrating the malignant Matter, draw it inward, and fix it in the Viscera. Now these Medicines, whether they

they work by Purging, or Sweat, ought to be ſuch as have Particles of the ſame kind with the venemous Miaſm, rather than with our Blood or Spirits; for ſuch a Medicine will paſs through the various Involutions of our Body with its entire Force, and by reaſon of the Similitude of both, will certainly lay hold on the virulent matter of the Diſeaſe, and through a mutual Adhæſion of Parts, Nature being irritated, will carry it forth with it ſelf: wherefore Medicines, whether Catharticks or Sudorificks, are moſt recommended, which are prepar'd of *Mercury*, *Antimony*, *Gold*, *Sulphur*, *Vitriol*, *Arſenick*, and the like; which, in regard they are not ſubdued, or overcome by our Heat, become excellent Remedies againſt the Venom of the Peſtilential Contagion; for, theſe do not only powerfully evacuate ſuperfluous things, but for as much as they exert, and diſplay on every ſide in our Body very ſtrong and maſterleſs Particles, they diſſipate, and hinder from Maturation, the Ferments of the Venom gliding every way. And ſince the Remedies themſelves, being inſuperable by Nature, muſt of neceſſity be ſent away by the open paſſages of the Body, they carry forth together with them whatſoever is extraneous and hoſtile.

As to Alexipharmicks, which are ſaid to reſiſt the Venom of this Diſeaſe without a ſenſible Evacuation, they are for the moſt part ſuch whoſe Particles are neither very agreeing with Nature, that they turn to an Aliment, nor are ſo contrary to it, that they ſtimulate an Excretion. The ſame being inwardly taken, and refracted to moſt minute Parts, they, by their Corpuſcles, inſpire as it were with a new Ferment, the Blood and Juices flowing in the Veſſels and Viſcera, and by moving them gently, and keeping them in an even mixture, they free them from Coagulation and Putrefaction: by the ſame gentle Agitation they diſſipate from each other, and hinder from maturation the Particles of the Venom beginning to be gathered thick together. Laſtly, by præoccupying the Blood and Spirits, they defend them from the Ingreſſions of the peſtilent Character: of theſe Remedies ſome Simples are recommended, as *Rue*, *Scordium*, &c. but thoſe are eſteem'd far better, which are more compounded; wherefore *Treacle*, *Mithridate*, and *Diaſcordium*, whereof ſome conſiſt of at leaſt fifty Simples, are accounted Medicines ſo compleat in all Reſpects, that it is eſteem'd a Crime to omit, in the making of them, ev'n one Plant; the Reaſon haply is, That many things being put together make a Maſs, whoſe diverſifyed Particles, being exalted by a long Digeſtion, cauſe a greater Fermentation in our Blood and Humours.

Having thus ſet down the Remedies with which we ought to be provided for curing the Plague, we ſhould ſpeak next of its method of Cure, to wit, what is to be done in the firſt place, and what next in order; but that all things are ſo precipitated in this Diſeaſe, that there is no room for Deliberation, nor will a Phyſician be frequently pre-

preſent with the Diſeas'd for fear of Contagion: wherefore there is no need here of many Præſcripts, or a long Series of Indications. This thing is to be done quick, and muſt be comprehended in a few words: when therefore a Peſtilence reigning, any one is infected with this Diſeaſe, God's help being implored, we muſt preſently flye to Remedies. If the Plague happens in a Body that is not well purg'd, and prone to Vomit, preſently let a Vomitory be taken; the Operation of which being ended, preſently Diaphoreticks being giv'n, let a Swear be procured, and let the ſame be continued as the Strength will bear; afterward let it be often repeated: moreover, Alexipharmicks muſt be uſed almoſt every moment, till the Venom be wholly ſent forth by the eruption of Puſhes, Carbuncles, or Buboes; nevertheleis, in the mean while, let reſpective and proper Remedies be oppos'd to the Symptoms chiefly preſſing; but eſpecially for the cure of Buboes and Carbuncles, let fit Aids be taken from Chirurgery. The whole ſtreſs of the Buſineſs relyes on theſe two chief Intentions, that the peſtiferous Venom be by all means expelled from within, outward; and then that the Return of it, being expulſed, be with an equal Diligence prevented.

It is not an eaſie thing for us, in the Plague, to give Examples and Hiſtories of Perſons diſeaſed, with exact Diaries of Symptoms; for theſe kinds of Sickneſſes do not happen every Year, nor when they are rife is it free for every Phyſician, who minds his own Health, to viſit the Sick with a curious Eye, or to ſtay long with them, that he may diligently obſerve every Accident, and carefully weigh the Reaſons of them; which Task, nevertheleſs, the Famous *Diemerbroch* has ſo accurately performed, that ſince him, others may lawfully ſurceaſe from this Work. When heretofore in this City, *viz.* *Anno* 1645. a Plague (tho not exceeding great) was rife, Mr. *Henry Sayer*, a Phyſician very learned, and fortunate in Practiſe, boldly went to viſit all ſorts of ſick Perſons, both poor and rich, many others refuſing this Undertaking: he daily gave them Medicines, touching Buboes and virulent Ulcers with his own Hand; and ſo by a diligent, tho dangerous, means, cured many of the Diſeaſed. To fortifie himſelf againſt the Contagion, before he went to infected Houſes, he only was wont to drink a good Draught of Generous Wine, and after he had gone his Circuit, to repeat the ſame Antidote. After that he had taken Care a long time of the Sick in this City, without receiving any Injury, as though he were Plague-free, he was ſent for to *Wallingford* Caſtle, where this Contagion violently raged, as a ſecond *Æſculapius*, to the Governour of that place; and there, in a ſhort ſpace, having dar'd to lye in the ſame Bed with a certain Officer ſeiſed with the Plague, whoſe Society he very much delighted in, he took the Infection of the ſame Diſeaſe: nor could then thoſe Arts prove of Uſe to their Maſter, which had been beneficial to all others, nor without a mighty

loſs

loſs in the Art of Phyſick, did he periſh by that Diſeaſe. To others ſeiſed with the Peſtilence, he was wont to order this method of Cure; If he was called before Puſhes or Buboes appeared outwardly, for the moſt part he gave *Vomitories*, the Præſcripts of which were of the Infuſion of *Crocus Metallorum*, ſometimes with white Vitriol, and ſometimes with *Roman*; the Vomiting being over, he cauſed them to be caſt into a Sweat, by giving preſently Diaphoreticks; and afterward, ſome Intervals being allowed for the reſtoring of the Strength, he ordered the Sweating to be continued even to the Declination of the Diſeaſe: but if he was called to Perſons affected after the Tokens appeared, Vomiting being omitted, he inſiſted only on Sudorificks.

CHAP. XIII.

Of peſtilential and malignant Fevers in Specie, *and other Epidemick Fevers.*

AFter having explicated the Nature of the Plague, according to the Order of our Tract, we ought to proceed to thoſe Affects which ſeem neareſt to carry its Nature; as are chiefly the *Fevers* called *Peſtilential* and *Malignant*: for it is vulgarly known, that Fevers ſometimes reign among the People, which for the Vehemency of Symptoms, the mighty Slaughter among the Diſeaſed, and the force of the Contagion, ſcarce yield to the Peſtilence; tho becauſe they imitate the Types of Putrids, nor do not ſo certainly kill the Affected, or infect others, as the Plague, they do not deſerve the name of *Plague*, but in a milder Appellation, of a *Peſtilential Fever*. Beſides theſe, there are Fevers of another kind, whoſe Deſtruction and Contagion are more remiſs; yet becauſe they are more dangerous than Putrids, and contain ſomewhat of Divine in them, as *Hippocrates* calls it, they are called, in a lower Expreſſion than the others, *Malignant Fevers*.

Theſe Fevers differ both from the Plague, and from each other, according to the Degrees and Vehemency of the Contagion and Deſtruction; ſo that the *Plague* is a Diſeaſe contagious, and deſtructive to Mankind in the higheſt Degree: A *Peſtilential Fever* is that which generally reigns with a leſs Diffuſion of its Miaſm, and with a leſs Mortality: when an Infection is only ſuſpected, and only a treacherous or unſafe Criſis happens, above the Events of vulgar Fevers, it is ſaid to

be a *Malignant Fever*: They may be describ'd yet more fully, thus:

When a Fever vulgarly reigns, which for the variety of Symptoms carries the Nature of a *Putrid* so called, *viz.* which has a Thirst, Burning, Lassitude, restless Pain, a Roughness of the Tongue, Watchings, a Frenzy, Vomiting, loss of Appetite, Fainting, Swooning, a Cardialgia, and the concourse of other terrible Accidents joyn'd with it; if moreover, there be added to it Spots either like small Flea-bites, or broad and black and blue like the Impressions of Stripes; we esteem this Disease of an ill Nature: again, if it does not discover it self after the wonted way of Fevers, but the Strength of the Sick falls without a manifest Cause, and Death often happens on a sudden, and unsuspected, contrary to the Prognostick of the Physician, there grows still a greater suspicion of *Malignity*: but if most of the Sick dye, and those that converse with the Diseased take the Infection of the same Disease, so that oftentimes the same runs through whole Parishes and Cities, it is called, above the Appellation of a Malignant, a *Pestilential Fever*; of which, a farther Proof is made if it generally rages in most with some common Symptom, as with a Quinsey, a Dysentery, or if a mortal Sweat, such as heretofore was famously known in *England*, accompanies these kinds of Fevers.

But if a Fever arises, which affects many together living in the same Region for the most part after the same manner, which nevertheless in its Course observes the laws of a vulgar Putrid, and comes to a Crisis almost after the same manner, (but that in some, troubled with a mighty Cacochymia, it discovers certain signs of Malignity by an appearance of Spots or Buboes, sometimes by a mortal Crisis, and a Contagion spreading to others) this is not called a pestilent, but only a *Malignant Fever*.

If it be enquired in which Classis of the Fevers above treated off, *Pestilent* and *Malignant* Fevers are placed, we put them only in the Rank of *Continual Fevers*, and exempt Intermittents from them, because by Intervals these grant such firm Truces to Nature, and likewise observe regularly and exactly their Periods, which will not consist with a venemous Diathesis: we exempt also Hecticks from Malignity, because otherwise they would not protract Death so long, but, partaking of Venom, would kill sooner. Of Continual Fevers, tho we do not look upon *Simple Sinochi*, as free, yet we assert them to be seldom touch'd with this Taint; but most commonly, the Fever which gives marks of a pestilent Nature or Malignity, is such as imitates the Type of that we call a Putrid Fever: for since in these Fevers, besides the Phœnomena of a Virulency, we observe a continued Effervescence of the Blood, which, as in Putrids, passes through the Stages of a Beginning, Increase, Height, and Declination, we justly conclude, that the *sulphureous* part of the Blood here, is heated, and kindled, and by its

its burning brings the Fever: wherefore, in theſe kinds of Fevers two things are chiefly to be noted, to wit, the *Effervescence* of the Blood, and a *Malignity* joyn'd with it, of which ſometimes this, ſometimes that, excells, and in both there is a great Latitude, and there are many Degrees of Intenſion, according as the Fever becomes more or leſs acute, or malignant.

The *Effervescence* happens after the ſame manner, as it is ſaid before of putrid Fevers, to wit, the ſulphureous part of the Blood, growing hot above meaſure, by its fervour, takes to a Flame, as it were; whilſt it burns it heaps together a vaſt Store of aduſt Matter in the Blood; on the ſubduing and excluſion of which, after the wonted manner of Fevers, the height and Criſis depend: but beſides, the Blood being infected with a certain *venemous Miaſm*, begins, in burning, by reaſon of the malignant Ferment, to be coagulated, and to putrifie by Parts: wherefore, beſides the uſual Symptoms of a vulgar Fever, by Reaſon of certain Portions of the Blood being congealed, or mortified, a Fainting and Dejection of the Spirits, alſo Appearances of Spots and Marks enſue. Moreover, the Venemous Effluvia, which part from the Diſeas'd, by the force of the Contagion, are able to ſtir up the like Affect in others: wherefore, by reaſon of the Deſtruction and Contagion, and the various Degrees of the ſame, it is call'd a *Peſtilential* or *Malignant Fever*.

When the Blood, boyling over vehemently, is infected alſo with a malignant and venemous Ferment, not only Coagulations of its own Maſs, with a Diſpoſition to a Putrefaction are caus'd, but the *nervous Liquor* alſo readily contracts this Taint; whence being rendred diſproportionate to the Brain, and for the œconomy of the animal Spirits, it ſtirs up great Irregularities in them: wherefore, not only Spots and Puſhes, but oftentimes a Delirium, Frenzy, drowſie Affects, Tremblings of the Limbs, Cramps, and convulſive Motions, happen upon theſe Fevers. We often obſerve, that in certain Years malignant Fevers are rife, which without an appearance of Marks, ſhew their Virulency chiefly about the *Genus Nervoſum*; for in ſome, preſently from the Beginning, a Sleepineſs, with a mighty Drowſineſs of the Head, in others obſtinate Watchings, a Diſturbance of Mind, with a Trembling, and convulſive Motions: but in moſt, either no Criſis, or a deceitful one; and inſtead of it, a Tranſlation of the febrile matter to the Brain has followed. It has been farther obſerv'd, that theſe Fevers have paſt by Contagion into others, and that many have died of them; ſo that they deſerve to be call'd *Malignant*.

Now theſe kinds of Fevers ſometimes are firſt begun by a venemous Miaſm; and the Blood being blaſted with the Particles of the Poyſon, naturally falls into an over-vehement boyling, and is inflamed; as when any one, by a Contagion, or by breathing a malignant Air, falls into a malignant Fever, without an evident Cauſe, or Præ-

diſpoſition: and ſometimes a feveriſh Diſtemper ariſes from its own cauſe; and afterward the Seeds of the Malignity, either lying hid within the Body, exert themſelves in the Blood boyling over vehemently, or come from elſewhere from a contaminated Air, as a Fewel to a Flame firſt kindled: for it is manifeſt by frequent Obſervation, that during the time an Epidemick Fever reigns, others, after what manner ſoever they ariſe, paſs into it.

Malignant Fevers, as alſo Peſtilential, for the moſt part are Popular, and ſeiſe many together; but ſometimes they are peculiar and ſporadical, that haply they ſeiſe only one or two in a whole Country. In ſuch a caſe we may imagine, that they proceed, not from an Infected Air, or Epidemick Cauſe, but from a morbid Diſpoſition of the Body; for I have often obſerv'd, that when, Spring or Fall, a pretty common Fever has reign'd in ſome City, or Village, of which a great many Sick eſcap'd; haply ſome one, on whom an evil Prædiſpoſition, and a ſtrong evident Cauſe, brought the Fever, lay ſeis'd with more dreadful Symptoms, and great Notes of Malignity: in which Caſe, that Malignity is not to be ſaid a common Fever, but only a ſporadical and accidental one.

Tho the greateſt Difference whereby theſe kinds of Fevers are diſtinguiſhed betwixt themſelves, and from others, conſiſts in their Mortality and Contagion; yet ſometimes they are mark'd by ſome peculiar Symptom, from which both the note of Malignity, and the name they are called by, are taken for that time: hence in ſome Years an epidemick Fever reigns, which cauſes in moſt that are affected with it, a Quinſey, at another time a Peripneumonia, Pluriſie, Dyſentery, or ſome other Affect, and that often dangerous and contagious: ſo that not only the Seeds of Diſeaſes deriv'd from Parents *ex traduce*, diſcloſe their Fruits by a certain Deſtiny, as it were, in the ſame Part or Member; but alſo ſuch as are received from a venemous Miaſm generally reigning, produce in all Perſons Affects of the ſame manner and form: which nevertheleſs I judge to happen, not becauſe the Seeds of the venemous Miaſm regard this or that Region of the Body by ſome peculiar Vertue: but they affect thus the Maſs of Blood after the ſame manner in all, foraſmuch as, for waſhing off that taint, a Criſis muſt of neceſſity be attempted after the ſame manner in all; for when without Malignity, the Blood is apt to be extravaſated by reaſon of Coagulation, or haply for other Cauſes, the uſual Places in which the Portions of the ſame extravagated are wont to be fix'd, are, the Throat, Pleura, Lungs, and Inteſtines: wherefore it's no Wonder when a Congelation, and therefore an Extravaſation of the Blood is procur'd from a malignant Cauſe, if the Diſeaſe lodges it ſelf in the uſual ſeat of Nature.

As to the *Signs* of theſe kinds of Fevers, beſides by the Contagion and Mortality, the Malignity of the Fever is ſhewn by a ſudden Dejection of the Strength, a weak and uneven Pulſe, an evil Affect of the Brain

Brain and nervous Parts caus'd on a ſudden, violent Vomitings, a blackneſs of the Tongue, an over-ſpreding of Blackneſs over the whole Body, but eſpecially by an appearance of Spots, Buboes, and other Marks.

For the *Cure of Fevers*, both *Peſtilential* and *Malignant*, there is need of a greater Judgment and Circumſpection than in any others whatſoever; for there being two primary Indicants, to wit, the *Malignity* and the *Feveriſh Diſtemperature*, and ſince we can ſcarce provide for the one without the Detriment of the other, it will not be eaſie to judge which we muſt obviate firſt, and chiefly take care off: in reſpect of the *Fever*, Purging, Bleeding, and cooling things, chiefly conduce; but whilſt theſe things are uſed, the *Malignity*, for the moſt part, is increaſed, and they being neglected, it diffuſes it ſelf farther. Againſt the *Malignity*, Alexipharmicks, and Diaphoreticks are required; but theſe greatly intend the Fever, exagitate, as by a blowing of Bellows, the Blood and Spirits kindled before, and put them in a manner all in a Flame: wherefore there is need here of a great Quickneſs of Underſtanding, that theſe things be duely compared betwixt each other, and that the curative Intentions be there directed where moſt danger ſhews it ſelf; tho ſo, that while one is taken care of the other be not neglected: but in theſe Caſes, beſides the private Judgment of each Phyſician, Experience furniſhes us with the chief method of healing; for, when theſe Fevers firſt grow riſe, almoſt every particular Perſon trys particular Remedies; and from their Succeſſes compar'd together, it is eaſily learnt, what kind of Method we muſt inſiſt on, till at laſt, by a frequent Tryal, as it were by the Foot-ſteps of Paſſengers, a common, and Road-way as it were is made to the Cure of theſe kinds of Affects, being fortified with various Obſervations and Precepts.

Beſides theſe kinds of *Fevers*, which aſſail many together, and by reaſon of their Contagion, Mortality, and conſpicuous Marks of Virulency, deſerve to be called *Peſtilential*, or *Malignant*; there are found ſome other Epidemick or Popular Fevers, which almoſt every Year, either Spring or Fall, grow very riſe in certain Countries, of which a great many of the Inhabitants are wont to fall ſick, and not a few, eſpecially of the more elderly People, to dye: in which, nevertheleſs, no Signs of a *peſtilent* or *malignant* Nature appear; nor does the Diſeaſe ſeem ſo much by Contagion to paſs from ſome incontinently to others, as to ſeiſe many together by reaſon of a Prediſpoſition communicated almoſt to all. Now theſe kinds of Affects depend chiefly on a foregoing Conſtitution of the Year; for if a Seaſon very intemperate, by reaſon of exceſſes of Cold or Heat, Drought or Moiſture, has preceded, and has ſo continued a long time, it changes our Blood, for the moſt part, from its due Temper, whereby it is apt afterward to fall into feveriſh Effervеſcencies; and hence a Fever, ſometimes of this, ſometimes

ſometimes of that Type and Idea, is produced, which preſently becomes epidemical, becauſe it draws its Origine from a common Cauſe, whereby the Bodies, in a manner, of all Men, are affected together. Now ſuch Fevers, in as much as they depend on the Blood, getting a Diſpoſition, ſometimes ſharp, ſometimes auſtere, or of another kind, according to the Temper of the Year, for the moſt part they are of the number of Intermittents, tho they are wont to be mark'd with a peculiar *Apparatus* of Symptoms, according to the peculiar Conſtitution of each Year. We cannot comprehend theſe under a certain common Rule, or formal Conſideration, which aptly anſwers to each of the Particulars of this Nature, becauſe they vary yearly according to a great many Accidents: tho however, of theſe kinds of Fevers reigning of late Years in this Country, we ſhall give the Deſcriptions taken at that time; and ſhall ſet them down as a Concluſion at the end of this Work.

It remains for us ſtill to add to the number of Malignant Fevers, certain other private Fevers, partaking of no Contagion, as are thoſe eſpecially, which are wont to happen to Women in Child-bed, by reaſon of their difficult Labour, or for that the Lochia are detain'd; for it is manifeſt enough, by common Obſervation, that theſe are very dangerous, and often mortal: for if the Parts of the Womb being injured, or upon the admiſſion of Cold, or haply for ſome other Cauſe, the Lochia are ſtopt, and the Humour which ought to have been voided forth, comes to be mingled with the Maſs of Blood, it fouly defiles it with a certain venemous mixture, as it were, that thereby preſently a Fever is raiſed, which for the moſt part is attended with an ill Company of Symptoms, *viz.* a Heat, and violent Drought, a Vomiting, a Cardialgia, and Watchings, and generally comes either to no Criſis, or a very difficult one; becauſe, unleſs the flowing of the Lochia after their wonted way be again reſtor'd, after the Blood has undergone an Effervеſcence for ſome Days, the Taint is wont to be communicated to the Brain, and the *Genius Nervoſum*; whence preſently a Delirium, Frenzy, Convulſions, and other very ill Affects for the moſt part are cauſed, which often terminate in Death. But theſe kinds of Fevers deſerve a peculiar Conſideration; which we reſolve to have more fully beneath, in a Diſcourſe appropriated to this purpoſe: mean while we muſt give ſome Inſtances or Examples of the Fevers above treated of, *viz.* of the *Peſtilential* and *Malignant*.

The *peſtilential Fever*, of late Years, has reign'd more rarely in theſe Parts, than the Plague it ſelf. I ſhall give you briefly the Deſcription of the only one of this kind which has occur'd to our Obſervation. *Anno* 1643. when in the beginning of the Spring the Earl of *Eſſex* beſieg'd *Reading*, kept by the King's Garriſon, in both Armies a very Epidemick Diſeaſe began to ariſe; tho however, he purſuing his work till

till the Beſieged were forced to a Surrender, The Affect ſo prevail'd, that in a ſhort while afterward there was a Ceſſation on both ſides, and thenceforward, for many Months, there was a Conflict, not with the Enemy, but with the Diſeaſe. *Eſſex* withdrawing his Forces, ſeated himſelf at ------, and the adjacent Places, where, in a ſhort time, he loſt a great Part of his Men: and the King returned to *Oxford*; where the Souldiers firſt keeping themſelves in the open Field, and afterward being diſpoſed off in Towns and Villages, he underwent a loſs not much inferiour; for his Foot (whom it chiefly ſeiſed) being lodg'd a great many of them together in ſtreightned Lodgings, when they had filled all Places with Naſtineſs and Filth, and ſtinking Odours (that they ſeem'd to have defil'd even the Air it ſelf,) fell ſick many of them together, and as it were in Files: at length the Fever, reaching farther than the Souldiery, aſſailed every where the weak Multitude, to wit, the Perſons of the Houſes where the Souldiers lodged, and others, tho many of them at firſt (the Contagion being yet but mild upon them) eſcaped, yet lying a long time in a very languiſhing Condition. About the Summer Solſtice, this Fever began to ſpread it ſelf with a worſe Attendance of Symptoms, and to ſeiſe a great many Husband-men, and others living in the Country: and afterward it reigned in this our City, and the whole Neighbourhood, for at leaſt ten Miles round about; mean while, thoſe who liv'd in other Countries far from hence, as tho they were beyond the Sphere of the Contagion, continued free from harm. But here that Diſeaſe grew ſo general, that the greateſt part of Mankind was infected with it: whatſoever Houſe it entred, preſently it ſet upon the whole, that there were ſcarce enough remaining in Health to attend thoſe that were ill; ſuch as came to them from elſewhere, or Hirelings called to attend the Diſeaſed, were preſently ſeiſed with the ſame Infection: that at length, for fear of the Contagion, ſuch as lay ſick of this Fever, were ſhunn'd by thoſe that were in Health, in a manner, as Perſons troubled with the Plague.

Nor did a ſmall Mortality or Deſtruction of Mankind attend this Diſeaſe; for a great many old Men, Cachectical, Pryſical, or otherwiſe unhealthy Perſons, fell under this Fate: alſo not a few Children, Youths, and ſuch as were full grown. I remember, that in certain Villages, all the elderly People, in a manner, were carried off this Year, that there ſcarce remained alive any for upholding the Cuſtoms and Priviledges of the Pariſh, by the Traditions receiv'd from their Anceſtors.

When this Fever firſt began it carried ſomewhat the Type of a putrid Synochus, but it came with difficulty to a Criſis, and when it ſeemed to be ſolv'd by a Sweat, or a Looſneſs, it was wont preſently to wax worſe again: but for the moſt part after a Deflagration of the Blood, continued for ſix or ſeven days, this remitting, and inſtead

ſtead of a Criſis, the aduſt Matter being convey'd to the Brain, the Diſeaſed lying a long time, ſometimes raving mad, oftner with a Drowſineſs and a great Weakneſs, and ſometimes with convulſive Motions, ſcarce eſcaped at length with Life. About the middle of the Summer, beſide the Contagion, and the frequent Mortality, this Diſeaſe diſcovered its malignant and peſtilential Force, by open Signs, *viz.* by the Eruption of Puſhes and Spots; for about this time, without any great burning of a Fever, the Pulſe in many grew uneven, weak, and very diſorderly; alſo, without a manifeſt ſpending of the Spirits, the Strength preſently became languid, and very much dejected; in others, lying ill after the like manner, Pimples ſometimes ſmall and red, ſometimes large and livid, appear'd; in many, Buboes (as in the Plgaue) about the glandulous Parts; ſome of theſe, without any great Conflict of the Spirits, or ſeveriſh Excandeſcence raiſed in the Blood, died without noiſe and on a ſudden: mean while, others, growing preſently raving mad, as long as they continued in Life, underwent horrible Diſtractions of the Animal Spirits. Such as eſcap'd from this Diſeaſe, recovered not but after a long time, and that without a laudable Criſis (unleſs by a Sweat procured by Art) the Brain at length, and the *Genus Nervoſum* being affected, and they being ſeized with a Dullneſs of the Senſes, Tremblings, a Vertigo, a Weakneſs of the Members, and convulſive motions. During the Dog-days this Diſeaſe ſtill infeſting, began to be handled not as a Fever, but as a milder ſort of Plague, and to be overcome only by Alexipharmick Remedies; Bleeding was always thought fatal to it: Vomitories and Purges were uſed now and then, tho not ſo frequently; but the chiefeſt method of Cure was placed in Alexipharmicks, and a Sweat ſeaſonably procured. For this purpoſe, beſides the Preſcripts of Phyſicians taken from Apothecaries Shops, certain Empirical Remedies deſerv'd no ſmall Praiſe: then firſt in this Country, *the Counteſs of* Kent's *Powder* began to be of great Fame; and another aſh-coloured Powder was not of the leaſt note, which a certain Courtier, coming by chance to this City, gave to many with good Succeſs, and ſold it others, who approved of its uſe, at a great rate. The Diſeaſed were wont, upon drinking half a Dram of this in any Liquor, to fall into a moſt copious Sweat, and ſo to be freed from the Virulency of the Diſeaſe: that Diaphoretick (the Preparation whereof I learnt afterward from the Authors Siſters Son) was only *the Powder of Toads*, cleanſed with Salt, and afterward waſhed with good Wine, and lightly calcin'd in an earthen Pot. Autumn coming on, this Diſeaſe remitted by Degrees of its wonted Fierceneſs, that fewer fell ſick, and a great many of them recovered; till upon the acceſs of Winter, a ſtate of Health was again entirely ſetled in this City, and in the adjacent Country.

Let

Let us here conſider the Riſe, Progreſs, and laſtly, the End of this Fever, which at firſt was only belonging to the Army, and at length became peſtilential and epidemick: that the Diſeaſe firſt began in the Souldiers Camp, it ſeems that it ought not only to be imputed to their Naſtineſs and ſtinking Smells, but in ſome meaſure, to the common Fault of the Air; for, ſince theſe Fevers do not happen yearly, their Origine will be ſomewhat aſcribed to the peculiar Conſtitution of the Year: for a light Diſtemperature of the Air being thereby contracted, tho it does not ill affect ſuch as uſe a wholſome way of living, yet in an Army, where, to the general *Procataxis*, evident Cauſes, *viz.* a great many Errors in the ſix non-natural things, are joyn'd, thoſe kinds of Sicknеſſes muſt of neceſſity be more eaſily rais'd. Now the Vernal Conſtitution of this Year was very moiſt, being almoſt continually attended with wet Showers; to which afterward a hot Summer ſucceeding, both rendred ſtill more depraved the Miaſms of the ſeveriſh Contagion reigning here before, and more diſpoſed all Bodies to receive them: wherefore, that this Diſtemper became in a manner peculiar to this Country, and epidemick at this time, it was long of its Seminary, ariſing in the firſt place from the Army lying round about: but in as much as becoming afterward peſtilential and very epidemick, it infected the greateſt part of Mankind here living, and killed not a few; the cauſe was, the ill Affect of the Air, which being unwholſome through the Diſtemperature of the year, became moreover ſo vicious at length, by the continual breathing forth of ſtinking Vapors from the Souldiers Camps, and the Cohabitation of the Diſeaſed, that the Miaſms of this Fever, diſperſt in it, were greatly exalted, and riſe almoſt to the Virulency of a Peſtilence. *Diemerbrochius* relates, That from ſuch a kind of Camp-Fever, rais'd in the Summer, in the Town of *Aquitane*, afterward another malignant and peſtilential, and at length the Plague it ſelf grew: and that this our Fever at laſt ſtood in competition with the Plague it ſelf, beſides the great force of the Contagion, and the great Mortality, the very ill Affects of the Blood and nervous Liquor, preſently cauſed in all from the ſame, did declare; for the Strength dejected on a ſudden, the weak, intermittent, and formicating Pulſe, the Eruption of Puſhes and Buboes, argued the Coagulation, and corruptive Diſpoſition of the Blood. Moreover, a Delirium, Mania, Frenzy, Deadneſs, Sleepyneſs, Vertigo, Tremblings, convulſive Motions, and other Affects of the Head of divers kinds, ſhew'd a mighty Annoyance of the Head and *Genus Nervoſum*.

For ſetting forth the Type, or Idea of the Malignant Fever to the Life, there are a great many Obſervations or Stories of Sick Perſons ready at hand: Of many Examples of this Diſeaſe, I ſhall here inſert only a few, which ſome years ſince happened in the Houſe of a Venerable Perſon, after a manner to be lamented, and not without ſome Admiration.

About the Winter Solſtice, *Anno* 1655. a Boy about ſeven years of Age, being ill without a manifeſt cauſe, was affected with a great Pain in his Head, a Sleepyneſs, and a mighty Heavineſs; there was withall a Fever, tho not intenſe, with an indifferent Burning, which nevertheleſs, by unconſtant Fits, had its time of being intended ſometimes once, ſometimes twice within the ſpace of twenty four Hours. Preſently, from the Beginning of the Diſeaſe, he ſlept almoſt continually, he was wont alſo to cry out in his Sleep, to talk idly, and oftentimes to leap out of Bed; being ſtirred up, and ſometimes awaking of his own accord, he was ſtraitway preſent to himſelf, and always deſired Drink: his Urine was ruddy, and fill'd with Contents; the Pulſe was uneven, and ſtrong enough; the Contractions of the Tendons in the Wriſts were light: in the Neck, and other Parts of the Body, certain red Spots, like Flea-bites, appeared. On the firſt days, a gentle Purge was ordered, and a frequent eaſing of the Belly by the uſe of Clyſters: Cordial Juleps with Alexipharmicks were daily taken: Veſicatories were applyed to the Neck, and other Plaiſters to the Soles of the Feet. On the ſixth day, a little Blood dropt from the Noſe. On the ſeventh the Fever very much remitted without a manifeſt Criſis, the Heat, being only mild, was perceivable by the Touch, and the Urine was pale and thin, without any Sediment; nevertheleſs, a Sleepyneſs, and Heavineſs of the Head preſt far more ſeverely, ſo that the Urine, and Excrements of the Belly, flowed from him inſenſibly: however, being call'd upon by Name, he knew the Standers by, and anſwered to things asked. Thoſe Affects, notwithſtanding Remedies, daily grew worſe and worſe. About the fourteenth Day the Diſeaſed became ſo ſtupid, that he could neither underſtand, nor ſpeak, yet he ſtill ſwallowed down things put into his Mouth, tho unminded by him, and his Pulſe was laudable enough: about this time he had a Looſeneſs, naturally happening to him, for four Days; which at length ceaſing, a whitiſh and chalky Cruſt, as it were, began to cover the whole Cavity of his Mouth and Throat, which being cleanſed off often in a Day, preſently a new one aroſe. When he had been troubled after this manner for four Days, he was better as to his Underſtanding and Senſation; ſo that he could know Friends, give a Nod to what was ſaid, and do ſome things he was ordered: but as the ſenſitive Faculty began to be reſtored, ſo the Evil increaſed as to the Organs of the Speech, and Swallowing: doubtleſs the Matter being fallen from the Brain into the Beginnings and Ductus's of the Nerves. The Heavineſs and Stupidity were followed by a Palſie in the Tongue and Throat; which Affect grew ſo much in a ſhort ſpace, that afterward the Diſeaſed was not able to ſwallow at all, but things put into his Mouth preſently came forth again, nor did any thing deſcend into his Stomach; when, beſides the Violence of the Diſeaſe, there was danger, leſt he ſhould dye through Hunger, an Inſtrument was made of a flexible Whale-bone, and a Lawn

Button

Button fix'd to the end of it; and this being thruſt into the Throat, opened for a time its Cloſure, that a Paſſage was made for Food giv'n; after the uſe of this a Day or two he could ſwallow again, and afterward take in Food enough; and within a few days he began to ſpeak, to diſcern every thing, and growing wonderfully hungry, to deſire all day long Food of all kinds, and moſt greedily to devour all things giv'n him: mean while, through his long-continued Sickneſs, and the nervous Parts being ſorely injur'd, he grew ſo lean, that at length the Skin ſcarce ſticking to the Bones, he exactly reſembled a living Skeleton; tho afterward by the diligent, indefatigable, and prudent Care of his Mother, as to his Dyet, he recovered a perfect Health, and continues ſtill well.

At the Time that this Boy was about the height of his Sickneſs, his Brother, about two years elder, fell ſick almoſt after the ſame manner, on the firſt day of *January*. Firſt, he was affected with a Dullneſs, and a heavineſs of the Head. On the third day growing feveriſh, he had a Sleepineſs and Stupidity: he began in his Sleep to talk light-headed, and upon his Awake, ſcarce to be preſent to himſelf. After four or five Days theſe Symptoms increaſed; he could underſtand little, nor ſpeak without tripping of his Tongue, and ſcarce arciculately: his Urine was thick, and opake, without an Hypoſtaſis, or ſubſiding of the Contents: red and ſmall Spots like Flea-bites appear'd, as in his Brother: the Excrements, as well of the Belly as of the Bladder, paſs'd from him inſenſibly; but the Pulſe held ſtill ſtrong and even: the Hypochondres were extended, and blown up with a Swelling of the Abdomen. About the eighth day a little Blood dropt from his Noſe: On the eleventh day of the Sickneſs he fell into a Looſeneſs, whereby he had ſeven Stools, of a bilous, thin, and very ſtinking matter, within five Hours; whence there was ſome hope, that the Condition of the Diſeas'd would change for the better; tho the next day after, the Looſneſs ceaſing, a Pain, and Gripes, violently tormented him in his Belly, that crying and howling, he complain'd moſt ſorely Day and Night: the Hypochondres and Abdomen were ſwollen, and very much diſtended like a Drum. Not receiving any thing of eaſe by any Remedies tryed by the moſt exquiſite Endeavours of many Phyſicians, he died on the fourteenth day, convulſt in theſe Tortures.

A little after the Death of this, *viz.* on the 15*th.* of *January*, his Eldeſt Brother, about eleven years of Age, a very hopeful Lad, began to be feveriſh, being affected with a Dullneſs, and a Heavineſs of the Head, as the former, tho leſs intenſe: but in his Blood, which was of a hot Temperament, a greater Effervescence and trouble appear'd, that on the firſt ſix days, beſides a Heat and Thirſt, he was moleſted with a continual Effort of Excretion, ſometimes by Sweat, ſometimes by a Looſneſs; his Urine was ruddy and troubled; certain red Spots,

as in the others, brake forth. On the ſeventh day an Hæmorrhagie happened to five ounces, which ceaſing, a mighty Dullneſs followed, that for all that day, and the following Night, he was ſcarce able to open his Eyes. On the eighth day a very copious Hæmorrhagie of the Noſtrils happened again, that there was danger of pouring forth his Soul together with the Blood; the Blood ſprang forth ſo copiouſly from the left Noſtril, that, being received into a Baſon, it made vaſt Bubbles by its fall: when he had loſt above two Pounds of Blood, and being all in a cold Sweat, began to loſe his Strength; Remedies being at length applyed, the Flux was ſtop'd with great difficulty; the Hæmorrhagie being appeaſed, the Lad ſlept a ſound Sleep, and became ſleepy all that Night; tho often waking, he was preſent enough to himſelf, and had a quick Senſe and Underſtanding: being asked concerning his Health, he ſaid he was pretty well; the Urine which before was ruddy, and troubled, appeared then pale, thin, and with a laudable Hypoſtaſis, that the Diſeaſed (eſpecially becauſe free from Thirſt and an immoderate Heat) ſeemed to be come to a perfect Criſis, and free from the Fever. The Morning following, the ninth day of the Fever, he continued ſtill dull; but being ſtirred up, he ſeemed without a Diſtemperature, and to be chearful in a ſtate of Convaleſcence, only that he began a little to faulter in his Speech: in the Evening, when things were not ſuſpected, the Fever being kindled again, he fell on a ſudden into a Lethargy, that he was ſcarce able to be awaked from his Sleep, and being pull'd up, hardly to know any one, or to ſpeak articulately: Tho ſo great a loſs of Blood had preceded, his Pulſe was again quick, high, and ſtrong, and his Urine was ruddy; after deriving and revulſing Remedies uſed all that Night, this noble Youth ſeemed ſomewhat in a better ſtate; ſo that the next Morning he kept himſelf longer from Sleep, began to turn his Eyes this way and that, and to raiſe himſelf a little, tho without Speech, or Knowledge of the Standers by; before Noon, his Eyes being clos'd again, he wholly loſt the uſe of every Animal Faculty, and lay, as it were, Apoplectical for three Days, with a high and vehement Pulſe, a Palpitation of the Heart, and a ſhort and broken Reſpiration: the Pulſe at length growing leſs by degrees, he died on the tenth day of the Fever.

On the 18*th.* of *February*, his little Siſter, having a feveriſh Diſtemperature and a Thirſt, began to complain of a Pain, and Gripes in the Belly, a trembling in the Hands, and a painful Tenſion in the Muſcles of the Neck. On the laſt day of *February*, being more openly feveriſh, ſhe was not able to keep out of Bed; moreover, ſhe was affected with a running Heat, ſometimes in the Hands, ſometimes about the lower Parts; ſhe became alſo drowſie and ſleepy; awaking from her Sleep ſhe did not forthwith come to her ſelf. On the firſt of *March* ſhe was gently Purged with an Expreſſion of Rhubarb, which

gave

gave her eaſe; the Urine was thick and ruddy, alſo red Spots like Flea-bites (as in the reſt) were plain to be ſeen. We gave her afterward frequently for four days, to wit, every ſix hours, *Ten Drops of Spirit of Harts-horn, in a Spoonful of a Cordial Julep:* the foreſaid Symptoms afterward remitted by degrees, and this ſick Perſon recovered her Health, tho ſlowly, without a manifeſt Criſis.

About the ſame time a Brother of theſe, the youngeſt of all, fell ſick almoſt after the ſame manner; who nevertheleſs, through a Looſneſs naturally happening, voiding bilous and green Excrements for many days, more eaſily recovered. Alſo in the ſame Family, a great many other Domeſticks, and ſome Strangers, who came there as Attendants, fell ill of the ſame Diſeaſe, the Taint, as it were being propagated by Contagion: all of which, notwithſtanding, eſcaped at length with a difficult and long Convaleſcence, without any Criſis regularly made.

That this Fever was malignant, it ſeems to be manifeſt, from the Contagion, Mortality, the appearance of Spots like Flea-bites, and many other Tokens; tho that infecting Miaſm, whereby it paſſed from one to another, was torpid and leſs efficacious: for betwixt the Sickneſſes of each, many Days, and often Weeks, interceded, that the Infection of this Diſeaſe, tho acute, and its Propagation in many, were ſcarce ended within four Months ſpace in the ſame Houſe: the Fever about the firſt Beginnings ſeem'd mild and gentle, not very terrible by its Burning: but the Matter heap'd together after the Deflagration of the Blood, preſently became maſterleſs, and difficult to be exterminated, alſo offenſive to the Brain and *Genus Nervoſum*; wherefore in each, the Beginnings of the Diſeaſe were known rather by a Drowſineſs and a Sleepyneſs, than by a Sweat and Burning: alſo the Criſis, tho attempted various ways, to wit, by a Sweat, a Looſneſs, and an Hæmorrhagie, did not ſucceed well; but for the moſt part, the Blood growing turgid by a critical Motion, was forc'd to transfer the febrile Matter from its own Precincts into the manſion Places of the Animal Spirits; nor did it ſelf, notwithſtanding, become purified after this manner; but about the height of the Fever, both Humours (to wit, the Blood and the nervous Juice) being vitiated together, and ſorely blaſted with an impure Mixture, made the Event of the Diſeaſe either fatal, or very dangerous.

CHAP.

CHAP. XIV.

Of the Small-Pox and Measles.

IN the rank of pestilential and malignant Fevers we place next the *Small Pox* and the *Measles*, which in Truth are mixt Affects, both according to, and against our Nature: As to their Origine, they have a seminary Connate to us; but as to the Affects, they produce præternatural Symptoms, and venemous, as the Plague it self; so that they constitute a certain peculiar sort of Fevers, which belong *to all Mankind, and only to them, and that but once.* If haply any one lives free from them all his Life, or some one falls often into those Affects, these are rare, and unusual Events of Nature, which do not derogate to common Observation: but it may pass for a Truth, that *all*, and *only* Mankind are obnoxious to the Measles and Small Pox, and that they are usually freed of them *at one Bout.* We shall speak of the *Measles* by themselves.

1. As to the *Small Pox*; The natural Prædisposition which inclines Mankind to it seems to be a certain Taint, or Impurity of the Blood, conceiv'd in the Womb with the first Rudiments of the *Fœtus.* All Authors, in a manner, will have this ascrib'd to the menstruous Blood: which Opinion does not seem altogether improbable; because in the Womb of a Woman (otherwise than in most other Animals) a certain Ferment is engendred, which being communicated to the Mass of Blood, gives it a Vigour and Pneumatosis, and afterward procures, at set Periods of Times, a Turgescency, and an Excretion of the superfluous Blood; and at the time of Conception, when the *Menses* wholly cease, a great deal of this Ferment is communicated to the Fœtus; and its Particles, being heterogeneous to all the rest whatsoever, are disorderly confounded with the Mass of Blood and Humours, as some extraneous thing; in which being involved, and being separated from each other, they lye hid a long time; tho afterward at some time being stirr'd by an evident cause, they ferment with the Blood, and cause in it an Ebullition, and afterward a Coagulation; from which most of the Symptoms of this Disease arise.

2. The *Evident Cause* which stirs these Fermentative Seeds, and oftentimes brings them into Act, is said to be threefold; *viz.* Contagion receiv'd from elsewhere, the Disposition of the Air, and an immoderate Perturbation of the Blood and Humours: Persons related soon infect each other; also those that are fearful, and mightily dread this Disease, fall more readily into it: for, by Fear the Particles of the Miasm

Miasm are convey'd from the Surface of the Body inward: at the time that the Contagion is rife, and the Small Pox is Epidemick, all other Diseases in a manner degenerate into this.

3. As to the *Conjunct Cause* of this Disease, to wit, what is the formal Reason of it, or its way of coming to pass, the thing seems a little more intricate: It is vulgarly wont to be compared to the Effervescence of new Wine, or of Ale, when they are depurated in a Vessel, being put in a Fermentation by the mixture of some heterogeneous Substance; but if the thing be narrowly considered, a great difference will here appear: for, the Miasm of the Small Pox is as a Ferment, but corruptive, and forces the Flood to ferment, not towards a Perfection, but a Depravation; for when the venemous Particles of this Miasm light on a capable Subject, they presently stir up Corpuscles like themselves, and innate to us; with which being joyn'd, they pervade the whole Mass of Blood, and make it grow mighty turgid, and boyl, and after some Effervescence, to separate into Parts, and to be coagulated: to wit, the dispers'd Seeds of the Venom dissolve the Mixture of the Blood, presently subvert the more pure Spirits, and afterward gather to themselves the more gross Particles of it, and congeal them, as it were, by their Adhæsion. The Portions so coagulated, together with the Seeds of the Venom mingled with them, being left by the rest of the Blood in its Circulation in the Extremities of the Vessels, are fix'd on the Skin: after which manner, if Nature being strong enough, sends off the whole Venom with the congeal'd Blood, the rest of the Mass of the Blood, tho depauperated, is nevertheless good, and capable of continuing Life; but, if the Blood being too much coagulated, cannot be cleansed after this manner; or if the Portions of the Blood closing with the Venom, do not fully break forth, they either restagnate inward again, and wholly corrupt the Liquor of the Blood, or fixing themselves on the Viscera, and especially the Heart, they destroy their Crasis and Strength.

The Portions of the Blood congeal'd with the Venom, about the fourth day (sometimes sooner, sometimes later) begin to break forth; for the Coagulation is caused not presently, but after some time that the Venom displays it self, and by its Effervescence ferments the Blood: first light Portions of the Blood being defil'd, and those but few in number, are fix'd in the Skin like Flea-bites; soon after these, more appear, and those which brake forth first, by the access of new matter, and by the continual Appulse of the congealed Blood, grow bigger, and are rais'd into a Tumour; afterward these Pushes, which at first are red, being encreased by degrees, at length turn white, to wit, the Blood extravasated with the Venom, by reason of the Heat and Stagnation, is chang'd into a *Pus*. About the seventh day after the Eruption, the white Tumours turn to a dry Scab; for the more subtle Part of the Matter being evaporated, the rest grows hard, which at length,

length, the Scarf Skin being eaten off and broken, falls from the Skin.

When the Miasm of the Small Pox is once gotten into the Spirits and Mass of Blood, it is very seldom that it can be destroy'd or clear'd off by Medicines or Bleeding, but the latent Disposition will break forth into Act; wherefore, first it diffuses it self gently, and inspires the Mass of Blood, as it were, with a Ferment: hence an Ebullition and Effervescence are produced in the whole Body, the Vessels are extended, the Viscera are irritated, the Membranes are twitch'd, till the Seeds of the Contagion, by fusing and coagulating the Blood, at length being involv'd in its congeal'd Portions, are thrust forth. The Essence of this Disease will be the better known, if I set down the Signs and and Symptoms which are observ'd in the whole Course of it, and give you in order the Reasons of them, and the Causes on which they depend. Now these are either such as indicate the Disease present, or such as fore-shew the height of it, and its event.

As to the *Diagnostick* of this Affect, whereby it may be known whether any one, at first falling sick, will have the Small Pox or not. There must be considered at that time, the force of the Contagion, and the Concourse of the Symptoms first appearing; for, if by reason of the malignant Constitution of the Air, this Disease generally reigns, no one is then seised with a Fever without a suspicion of the Small Pox, especially if the Person never had it before: but if this Disease be more rare, and there be no Fear of Contagion, yet its unexpected Invasion in a short time discovers it self by these kinds of Signs and Symptoms.

1. There is an inconstant Fever, coming at random, sometimes intense, sometimes more remiss, observing no set form of Increase, or coming to a height, so that the Distas'd one while are mighty hot, by and by, without an evident Cause, they are without any Fever; the Cause of which is, That the fermentative Seeds are not agitated with an even motion, but like Fire half extinct, one while they have an extraordinary Flash, another while they lye quiet, and dye, as it were, till the Burning spreading it self, the Flame breaks forth every where.

2. A *Pain in the Head* and *Loins* is so peculiar a sign in this Affect, that it alone, in a continual Fever, signifies an imminent Small Pox; the Cause of which, is vulgarly imputed to the great Vessels being very much extended by the Effervescence of the Blood; tho it does not appear why the same Pain should not be as well caused in other Parts by reason of the like Extension of the Vessels, and why those kinds of Pains are rife in the Small Pox, rather than in the *Causon*, or other Fevers, where the Blood boyls more. Again, you may observe, that mighty Pains are pressing, sometimes in the Head, sometimes in the Brains, when, the Blood not being turgid, the Vessels are not enlarg'd,

viz.

viz. in the beginning of the Diſeaſe, when the Feveriſh Diſtemperature is not yet conſpicuous: while the Diſeas'd are yet walking abroad, and have a good Stomach, the imminent Small Pox firſt diſcovers it ſelf by theſe Pains; wherefore, it ſeems that the Cauſe of theſe kinds of Pains ſubſiſts rather in the *Genus Nervoſum*; to wit, that thoſe Pains ariſe in the Brain, and ſpinal Marrow, by reaſon of the Membranes and Nervous Parts being twitch'd by the Particles of the Venom; for it is likely that the innate Seeds of the Small Pox are chiefly ſtored up in the Spermatick Parts, and that the firſt Contagion of the Miaſm for the moſt part ſeiſes the Animal Spirits: hence the firſt Effervescence is raiſed in the Juice wherewith the Brain and nervous Parts, but eſpecially the ſpinal Marrow, are irrigated; and thence the taint is communicated to the Maſs of Blood: wherefore, in the beginning of this Diſeaſe, the Head and Loins are preſs'd with a violent Pain; afterward, the Venom being convey'd into the Blood, the feveriſh Effervescence is rais'd in the whole.

3. A great Irkſomneſs and Reſtleſſneſs, and ſometimes a Swooning, infeſt the Diſeaſed, to wit, by reaſon of the Motion of the Blood being troubled, and its even mixture being begun to be diſſolv'd by the venemous Ferment, the Blood being hence apt to ſtagnate, and to be letted in its Circulation, cauſes the Affects even now mentioned.

4. A violent Vomiting, even when the Stomach is free from an impure Maſs of Humours, very often accompanies this Affect; the Reaſon of which is, becauſe the Fermentative ſeeds being put in motion, are depoſed in the little Arteries which open into the Tunicles of the Ventricle, upon each Appulſe of the Blood, and raiſe a Vomiting even as the Particles of Antimony ſwallowed down: but afterward, aſſoon as a Sweat being procur'd, the Venom is driven outward, this Symptom ceaſes, and the Diſeaſed are well in their Stomach, without any purging forth of offenſive matter.

5. To theſe may be added the Symptoms, which, according to the various Diſpoſitions of Bodies, happen after a various manner, as are, a great Sleepyneſs, Frights in the Sleep, Deliriums, Tremblings, and Convulſions, a Sneezing, Heat, Redneſs, a ſenſe of pricking in the whole Body, involuntary Weeping, a ſparkling and itching of the Eyes, a ſwelling of the Face, a Vehemency of Symptoms from the beginning that the Diſeaſe ſeems preſently to have reached its height, *&c.*

2. As to the *Prognoſtick* of this Diſeaſe, it is indicated either to be ſafe, or mortal, or doubtful, by ſupervenient Signs.

1. Things ſeem to be in ſafety when this Affect has benign Circumſtances; to wit, when it happens in a good Conſtitution of the Air, and of the Year, at a time that the Small Pox is not Malignant and Peſtilent; alſo there is leſs danger if it happens in Childhood, or Infancy, if in a ſanguine Temperament, and a good habit of Body, if it

chances in a Family to whose Predeceſſors the Small Pox has not been mortal: moreover, if in the whole Courſe of the Diſeaſe laudable Symptoms happen; if at the firſt Invaſion there be a gentle Fever without a violent Vomiting, a Swooning, a Delirium, or other horri[illegible]ſts; if, about the fourth day, the Fever with the moſt preſſing [illegible]ms are appeaſed, and then ſome red Spots begin to appear; [illegible] ſecond day of their coming forth, a great many more of thoſe red Spots are conſpicuous, which afterward grow by degrees into Puſhes, and are ripened into a *Pus*; if about the tenth day, more or leſs, after the Eruption, the white Puſhes begin to grow hard, and afterward to fall off by little and little; if after the time of their firſt breaking forth the Small Pox are ſoft, ſeparate from each other, few, round, raiſed at the Top, poſſeſſing only the Skin, and not the inward Part, we may preſume the caſe of the Diſeaſed to be in a good State.

2. The Phœnomena, which, in the Small Pox ſignifie the Caſe to be ſuſpected and full of Danger, are theſe; if there be a Malignant Conſtitution of the Air, that this Diſeaſe is become peſtilent, and many have died of it; if Perſons well grown in Years are ſeiſed with it, if it chances in a cold and melancholick Temperament, or in a foul and cacochymical Body, where the Blood is neither readily circulated, nor Perſpiration duely perform'd; or if the Hypochondres or Præcordia are obſtructed, any Viſcera infirm, or affected with an Ulcer; or if the Habit of the Body be too groſs, the Small Pox does not happen without great danger of Life: Nor is it leſs to be fear'd, when preſently at the beginning a mighty Fever, a violent Vomiting, a Swooning, a Dejection of the Strength, a Frenzy, or Delirium, aſſail Perſons, and give not over when the Small Pox are fully broken forth; for theſe things ſignifie an over-great Perturbation in the Blood and Humours, as alſo a Confuſion and Contumacy of the mortifying Matter, which can neither be ſubdued, nor eaſily ſeparated, or evenly extruded from the Maſs of Blood; if there be an Irkſomneſs, and a great Reſtleſſneſs, with a diſorderly Effervеſcence, and Ebullition of the Humours; or if a mighty Thirſt, and a difficuly of Breathing, alſo a Looſneſs, or Dyſentery, they ſhew that Tranſpiration is letted, and that the Malignant Humours reſtagnate toward the inward Parts. The Small Pox breaking forth ſlowly, argue the Crudity and Unruline[illegible] of the Matter, and the Impotency of Nature: much more, when double and confluent, do they ſhew that there is an exceſs in quantity, and a Confuſion, alſo a diſorderly and irregular Expulſion of that matter, ſince it is not caſt forth at determinate Pores or places of Vent, but indifferently on every ſide. Small Pox which are hard ſignifie the Incoctibility of the ſaid Matter, and if flat, the weak Expulſion of it, and they are by ſo much the worſe if black Spots appear in the midſt of them; or if ſuch Spots as are familiar in a Purple or Peſtilential Fever,

Fever, are mix'd with the Small Pox, they ſhew a mighty Malignity and Corruption of the Blood, ſuch indeed, as is found in the Plague. Finally, black, livid, or green Small Pox, threaten ill; becauſe, beſides the Coagulations of the Blood, they argue its Mortifications and Corruptions, as in a Gangrene, or peſtilent Carbuncle: if when the Small Pox are come forth, they preſently wither, and the ſwelling of [redacted] remits, it indicates the Receſs of the malignant Matter, or of the congeal'd with the Venom, and its Reſtagnation toward the Inward Parts; whence unleſs, upon raiſing a free Diaphoreſis, it be again ſent forth, a ſudden Death for the moſt part enſues: for hence the Blood being more coagulated, falls into Corruption, and is apt to be letted in its Motion, and to ſtagnate in the Heart and Veſſels. If after the Eruption of the Small Pox, a Looſneſs, or Hæmorrhagie ſupervenes, it foreſhews ill, becauſe by this means the Venom, driv'n outward, is again call'd in; tho I have obſerv'd, that theſe Symptoms have ſometimes hapned with a great Relief to the Diſeas'd; to wit, Nature being before loaded and oppreſt, is eas'd by this means, part of the Burthen, as it were, being withdrawn, wherefore ſhe ſets upon the Work of Tranſpiration, and more readily diſpatches the Expulſion of the offenſive matter.

As to what concerns the Cure, ſince the Courſe of this Diſeaſe has three Seaſons, like ſo many Stages as it were, diſtinct from each other: the curative Intentions ought alſo to be accommodated to each of theſe; wherefore, the Therapeutick Method concerning the Small Pox, teaches firſt what is to be done as long as the Blood boyls inwardly, and ferments by the Motion of the Fermentative Matter, and the Small Pox do not yet appear; which Period for the moſt part is wont to be ended in four or five Days. Secondly, what form of Diet and Phyſick ought to be ordered, from the time of the Eruption of the Small Pox to the height of the Diſeaſe, to wit, till the Puſhes are come to their height, and being fully ſuppurated, begin to wither. Thirdly, and laſtly, what we ought to obſerve in the Declination of the Diſeaſe, till the Small Pox, being dryed, fall clean off.

1. As to the firſt, the Intention muſt be, that we remove all Impediments of Nature, whereby the Blood being defiled with the Ferment of the Small Pox, and apt to be coagulated, may retain ſtill its even Motion in the Heart and Veſſels, without Stagnation, and that fermenting, it may expell forth the Portions congeal'd with the Venom: mean-while, a Caution muſt be had, that the work of Fermentation, or Effervescence, be neither any ways check'd, nor too much irritated; for by this the Maſs of Blood is forc'd into congeal'd Portions more than it ought, and by the other it is reſtrain'd too much in motion, nor are the venemous Particles ſent away forth with the congealed Blood. Nature is wont to be hindred from the work of Secretion and Expulſion, by a too great heap of Excrements

in the Viſcera, or by an over-abounding of Blood in the Veſſels; wherefore preſently, at the firſt Invaſion of the Diſeaſe, we muſt endeavour that an Evacuation by Vomit, or Seige, if need be, be ſeaſonably procur'd: we muſt uſe only mild and gentle Medicines, that is, which do not irritate, or trouble the Humours; wherefore, at this time, ſometimes Emeticks, Purges, or Clyſters, theſe one while, another while thoſe have place; opening a Vein alſo, if there be a Plenitude, is uſed with good Succeſs. During this Effervescence of the Blood, let a thin, and moderately cooling Diet, be ordered; to wit, of Oat and Barley Meats, Poſſet-drink, Small-Ale, and the like; let Fleſh, and Broaths made of it, be avoided, with which the Blood, by reaſon of their too great ſtore of ſulphureous Fuel, is too much kindled; alſo cold and all acid things, do hurt, for theſe congeal the Blood more, and contract the Mouths of the Veſſels by Aſtriction, that the Small Pox do not break forth freely: alſo let hot and cordial things be cautiouſly giv'n, for by theſe the Blood and Humours are too much ſtirred, and put in Confuſion.

2. When the Small Pox begin to appear, there are three things which we order conſtantly to be done to all Sick Perſons; to wit, that a mild and gentle *Diaphoreſis* be always continued in the Maſs of Blood; alſo that the Throat and Eyes be preſerved from the too great Eruption of the Small Pox; that the Blood gently boyling may puſh forth the Small Pox, Decoctions of Figs, of the Flowers of Marigolds, and of the Shavings of Ivory, in Poſſet-Drink, are vulgarly preſcribed, and their uſe has grown riſe for a long time, almoſt among all Perſons, For the ſame intent, we are wont to give moderate Cordials divers times in a day, but let ſuch as are hot and ſtrong be diligently avoided: Purging and Bleeding are here cenſur'd, and tho the Pretext of neceſſity may preſs for them, Phyſicians ſcarce dare uſe them for fear of incurring a Blame. For a Guard to the Parts of the Gullet and Throat, we are wont to faſten outwardly a Chin-ſtay with Saffron ſewen in, and dipt in Womans Milk; for theſe, by opening the Pores, draw the Venom from the inward part of the Throat, outward: alſo, for this Purpoſe we give Gargariſms, and things to waſh the Mouth, which by their reſtrictive Force repreſs the Small Pox ready to break forth inwardly. We fortifie the Eyes from the Incurſions of the Small Pox by Epithemes of Roſe-water, Womans Milk, Saffron, and the like, frequently iterated: Beſides theſe, certain horrible Symptoms are ſometimes preſſing, which we muſt ſeaſonably obviate with fit Remedies: ſometimes there are Watchings, a Frenzy, Hæmorrhagies, Vomitings, Looſneſſes, Fallings in of the Small Pox. A prudent Phyſician knows how to provide againſt all theſe, and any others whatſoever, as occaſion requires; in which, nevertheleſs, there is need of great Caution, leſt while we take care of ſmall things, the great Work of Nature be diſturb'd through the over-great diſquieting of

of Phyſick: for, during all this time, there is one continued Criſis; wherefore, nothing is to be mov'd raſhly. There is required a very great Care and Circumſpection both in the Phyſician and Attendants, when this Diſeaſe is in its height; to wit, That when the Small Pox are fully broken forth, and raiſed to their greateſt height, they do not hinder Tranſpiration; for then the Diſeaſed are in danger of having their Fever renewed, and of the Reſtagnation of the Malignant Matter inward, of which, while we endeavour to prevent either, we often cauſe the other.

3. When the Diſeaſe is in its Declination, and the Small Pox begin to wither away, and to grow hard, the Caſe for the moſt part is out of danger, nor has a Phyſician much to do: let the Diſeas'd, tho growing very hungry, ſtill be content with a thin Dyet, without Meat: if the Pox are ſlow in falling off, we are wont to haſten their Fall with Liniments and Epithemes, by which they are prevented from Pitting much. After that the Diſeaſed, the Small Pox being wholly fall'n away, is able to ariſe from his Bed, and to walk in his Chamber: a Purge being repeated twice or thrice, let the Filth, and excrementitious Matter left in the Viſcera, and Blood, be carried off, and afterward he may be permitted a more free Dyet.

The Meaſles are ſo allied to the Small Pox, that amongſt moſt Authors, they have not deſerved to be treated of apart from them; but the Affects of both are deliver'd after the like Manner and Method together. The Eſſence and Cure differ as to more or leſs, or at leaſtwiſe accidentally; becauſe in the Meaſles the Puſhes are not ſo much raiſed in height, nor are they ſuppurated: wherefore the Diſeaſe ends ſooner, and with leſs danger. This Affect is wont oftentimes to reign among Children, but ſeldom ſeiſes ſuch as are grown in Years, or old People; alſo thoſe who have had the Small Pox before, are not afterward ſo obnoxious to the Meaſles, but in moſt they are allied Affects; to wit, the Taint contracted from the Womb diſpoſes Men alone, all Men, and that but once to the Meaſles: A malignant Conſtitution of the Air, and ſometimes Surfeiting, but moſt commonly Contagion, are wont to draw into Act the latent Diſpoſition. There are Marks of Malignity, and the Diſeaſe often becomes Epidemical, with a Mortality, and Contagion.

To give you the thing in ſhort; it ſeems that the Meaſles are a certain light Efflorescence of an extraneous Ferment, contracted from the Womb; whereby ſome Particles, being ſtirr'd to motion, cauſe the Blood to boyl gently, and to be a little coagulated: wherefore, the Pimples thence brought forth, are blown off by Evaporation, without a breaking of the Skin. But the Small Pox are a more full and ſtrong Agitation of the ſame Ferment, and in all its Particles, which cauſing a greater Ebullition and Coagulation of the Blood, produces a great many more Puſhes, and thoſe greater in bulk, and not diſſol-

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vable without Suppuration. When the Small Pox precede, there follows not only an Immunity afterward from the same Affect, but for the most part from the Measles also. The Measles, because they consume only a few Particles of the Ferment, leave still a Disposition to the Small Pox; wherefore, old Persons, or such as are grown in years, are not so readily infected with the Measles, because having been before infected with the Small Pox, they are freed from the Contagion; or their Spirits being robust, easily resist the light Miasm of this Affect.

Of the great number of Stories and Observations relating to Persons troubled with the Small Pox, I shall in this place propose only a few Cases, and those remarkable for certain Irregularities.

It is a usual thing to treat all Persons, affected with the Small Pox, with the like, or wholly the same method of Healing, and form of Diet; wherefore, a Physician is seldom call'd to the Vulgar, but the Business is wholly committed to certain Women-Tenders, who boast that they know this Practice beyond all others; and those are wont to boyl Marygold Flowers, and Shavings of Harts-horn, and sometimes Figs in the Broaths, and any other Liquors to be taken by the Diseas'd, and to give at Night a Bolus of *Diascordium*: such as do not recover by such a Management, are declared not to be neglected, but that they are incurable through the Violence of the Disease. But that this kind of Practise does not equally agree to all, nor is to be us'd to all indifferently, the two following Relations plainly shew.

A Young-man about twenty Years of Age, of a thin Body, and hot Temperament, began to be severish in the beginning of the Spring: in the first days violent Vomitings, an Oppression of the Heart, frequent Changes of a burning and cold Shivering, a Pain in the Loins, a Perturbation of the Fancy, and Watchings, infested him: On the third day the Small Pox appearing, those Symptoms remitted, tho the Fever still continued with a Thirst and Heat. To this Person, not only the Decoctions usual in this Disease, but Juleps also, neatly prepar'd with a grateful Taste, were so nauseous and offensive, that he could not so much as sip of them without great loathing: as often as he took at Night *Diascordium*, or any other temperate Cordial, tho in a small quantity, for continuing a Transpiration, he passed the Night following without Sleep, and with a great tossing of the Body, and in the Morning he had an Hæmorrhagie, which happing once, and then a second time through this occasion, after that the Small Pox were fully broken forth, the well-doing of the Diseas'd was mightily endanger'd; wherefore, when I had found by Experience, that the Blood of this Person was apt to boyl immoderately upon a light Irritation, I ordered this Method, according as the Occasion required: All Physick whatsoever being laid aside, for quenching Thirst he took small Ale, and a simple Almond Drink at Pleasure: His Food, because he refus'd all

all Oat and Barley Broaths, was only Apples boyl'd to a Tenderneſs, and then ſeaſon'd with Sugar and Roſe-water, which he ate at ſome certain times in the Day. Nature, content with this thin Dyet, and ſeeming to be diſturbed by any other whatſoever, perform'd her work ſucceſsfully, that the Diſeaſed recovered without any ſore Symptom afterward, the Small Pox ripening by Degrees, and then falling off of their own accord.

In the midſt of *Autumn* of the laſt Year, a noble Youth, having a ſharp Blood, and being obnoxious to a frequent Bleeding at the Noſe, fell ſick of the Small Pox; his Blood naturally boyled immoderately, that the Puſhes brake forth extream thick all over his Body: in this Perſon, Whey with Marygold Flowers, and other things uſually boyl'd in it, alſo Juleps, or any Cordials (tho temperate) gently promoting a Tranſpiration, did moſt certainly raiſe a Flux of Blood; wherefore I ordered him a like way of Diet as to the Diſeaſed before mention'd, by which indeed he was better: however, in the very height of the Diſeaſe, (when, the Small Pox being fully broke forth, the Fever is wont to be renewed in all Perſons by reaſon of a difficult Tranſpiration) this ſick Perſon fell into a copious Hæmorrhagie; that after a large Profuſion of Blood the Small Pox began to be flaccid; after that a great many Remedies for ſtopping Blood were tryed in vain: at length, upon hanging a Bag about his Neck (in which was a Toad dryed in the Sun and pounded) he firſt of all, and immediately, found eaſe; for the Hæmorrhagie being hereby preſently appeaſed, and not returning afterward, (he conſtantly wearing thenceforward this Epitheme in his Boſom) our ſick Perſon uſing always a moſt thin and cooling Dyet, grew perfectly well: that it may really ſeem to be manifeſt hence, that tho the Blood in this Affect be mighty apt to coagulate, yet as long as the Vital Spirits are ſtrong and robuſt enough, and have a governing Power, relying on their own Strength, by a certain prudent Diſcretion as it were, they excellently ſeparate and ſend forth the congealed Portions of the Blood; and this Work is mightily diſturbed when the ſame Spirits are too much irritated, and forc'd into a Confuſion by hot Cordials or a hot Dyet. But in the Plague it happens otherwiſe; for, in this, if delay be granted, the Spirits themſelves are preſently deſtroyed by the Venom: wherefore, here we muſt preſently fight with open War; whereas, in the Small Pox a Phyſician rather reſtores things by protracting time.

Concerning letting Blood juſt upon the coming forth of the Small Pox, it is greatly doubted. Formerly, among our Country-men, this thing was ſtil'd ſacred, nor was Blooding wont to be admitted under any pretext of Neceſſity: but of late it is proved by Experience, that it is altogether uſeful and neceſſary to let Blood in ſome Caſes; which Evacuation, nevertheleſs, if it be uſed indifferently in any Conſtitution, or be done in too large a quantity, when there is need of it, great Damages often enſue thereby.

Some

Some years since, I went to see a Young-woman of Quality, of a florid Countenance, and a hot Temperament, who was fall'n very feverish after the fourth Month of her being with Child: she was press'd with a violent Vomiting, a fierce Pain in the Loins, and also with a most intense Heat and Drought: her Pulse was very quick, with a strong and vehement Vibration: tho the Small Pox no where reign'd in that place, nevertheless, those Symptoms of that Affect gave us no small suspicion of them. Be it how it would, the very immoderate Effervescence of the Blood indicated, that some ought to be taken away: wherefore, I presently took about six Ounces; thereupon the Heat somewhat remitted, tho the Vomiting still continued, with the violent Pain in the Loins. At the time of her going to rest, I gave her a Cordial Bolus with half a Grain of our *Laudanum*, whence a quiet Sleep, with a mild Sweat, and an appeasing of all Symptoms, ensued. The next Morning the Small Pox brake forth, which, tho the Diseased had very thick, yet without any dangerous Illness, or fear of Abortion, she recover'd, and perfectly compleated her Child-bearing.

In the last *Autumn*, a robust Man, of an Athletick Habit of Body, tho of a pale Countenance, and a cold Temperament, fell into a Fever. On the second day he was tormented with a Heat and a Drought, and a most violent Pain in the Loins; when, it was ordered that he should be let Blood in a small Quantity: a Quack Chirurgion being called, he took from him almost a pound and a half; a little after, the Diseased began to fall all into a cold Sweat, and his Strength failing on a sudden, to be seised with a Shivering, a weak and uneven Pulse, and a frequent Fainting: being called at this time, I ordered him temperate Cordials to be taken frequently: then upon the restoring of his Pulse and Spirits the Fever was renewed, which afterward held the Diseased for many Days, nay Weeks, after a very irregular manner; for he was wont, for three or four days, to be very hot, also to be infested with Thirst, Watchings, a Head-ach, and other Symptoms, afterward to fall into a copious, and as it were, critical Sweat, all over his whole Body, by which indeed, in half a days time, he found himself better, tho afterward the Fever renewing again, frequently heaped together a new Matter, still to be blown off by a second, and afterward by a third Crisis. After that he had lay'n thus irregularly feverish for at least twenty days, at length the Small Pox broke forth here and there in each part of the Body, and then the Fever first began wholly to remit; tho within a few days, by reason of Errors committed in Diet, a great many Pushes subsided again, a few only being brought to a Ripeness: however, in the place of the subsiding Small Pox, a mighty Bubo grew behind the right Ear; which being suppurated and broken within a short time, a great store of Pus flowed forth for many days; and so at length, the Taints of the Blood hardly

to

to be blown off other ways, were sent forth by degrees, and the Diseased perfectly recovered his Health.

CHAP. XV.

Of Fevers of Women in Child-bed.

VUlgar Experience abundantly testifies, that the Fevers of Women in Child-bed are very dangerous, above the Nature of our common Fevers: also it clearly appears from the Signs and Symptoms of them, duely considered, that the same very much differ as to their Essences, from a *Synochus* both *simple* and *putrid*: wherefore I have thought it not amiss, after malignant Fevers, to treat of the acute Diseases of Women in Child-bed, as being very much allied to them by reason of their Mortality. But before I shall set upon the Explication of the Affects themselves, we must consider their Subjects, to wit, the Bodies of Women that bring forth Children, after what manner they are prediſposed, and with what *Apparatus* they become obnoxious to those kinds of Diseases.

Concerning this, it first occurs, That to undergo a Flux of menstruous Blood belongs to Humane Kind, and that alway to Women; concerning the Nature and Origine of which, it does not concern us here to enquire; but it may suffice to note, that in them the Particles of the Blood to be voided periodically, are very fermentative, which if they are retain'd in the Body beyond the usual Custom of Nature, they oftentimes become the Cause of many Sicknesses; still excepting, if the Woman has conceived with Child; for all the time of Child-bearing the *Menses* stop without any great damage: and mean while, for the Nourishment of the *Fœtus*, Milk, or a nourishable Humour, is deposed in a great Plenty about the *Placenta* of the Womb: but, after Delivery, that long Suppression of the *Menses* is recompenc'd by a copious flowing of the *Lochia*, and the Milk, within three days space, leaving wholly the Womb, flies plentifully into the Breasts; at which time, Child-bearing Women are wont to be set upon by a small Fever: and if the Milk be driven from the Breasts, it restagnates again towards the Womb, and is voided forth together with the *Lochia* under the form of a whitish Humour. Mean while, after Delivery, the Womb it self undergoes various Affects, for often its Tone is injur'd, its Unity is dissolv'd, and a great many other Accidents are caused, which render Women in Child-bed subject to a dangerous Condition: where-

fore, that their acute Diſeaſes may be duely explicated, we muſt chiefly conſider theſe three things; to wit, firſt concerning the Nouriſhment of the *Fœtus*, or of the Generation of Milk, both in the Womb, and in the Breaſt, and of its Metaſtaſis from either of them into the other. Secondly, of the Purgation of the Maternal Blood, or of the flowing of the *Lochia* after the *Menſes* being long ſuppreſt. Thirdly, of the State of the Womb after Delivery, and of its Influence on other parts of the Body. And theſe things being premitted, we ſhall ſpeak of the Fevers of Women in Child-bed; to wit, both the Lacteal, and that called Futrid, which, by reaſon of its Mortality, deſerves to be call'd Malignant.

Firſt, the Milk and nutritive Humour, heap'd together in the Uterine Parts for the Nouriſhment of the *Fœtus*, are by Nature alike, tho they differ ſomewhat in Conſiſtency: the Milk indeed is the thicker, becauſe, being to be received in the Mouth, it ought to be digeſted in the Stomach, and afterwards its more tender Portion to be convey'd into the Maſs of Blood. The other nouriſhable Humour is more thin, and like to diſtill'd Water of Milk, becauſe it's immediately infuſed into the Blood of the Embryo, by the umbelical Veſſels, without a previous Digeſtion. Both Juyces are thought to conſiſt of the Chyle freſh made in the Mothers Stomach: that which is depoſed in the Breaſt is groſſer and whiter, by reaſon of the courſe Strainer, and its Coction in the greater Glands; it happens on the contrary in the Womb, where the ſtraining is cloſer, and the Glands are very ſmall. Now it is greatly diſputed among Authors, by what Ductus's that Humour is conveyed both into the Breaſt, and into the *Placenta* of the Womb. Some ſay that the Milk is engendred only from the Blood freely concocted in the Glands, which nevertheleſs does not ſeem probable, by reaſon of the immenſe Spendings of Milk which does not conſiſt with the Blood. Others affirm, That the Chyle, or Lacteal Humour, is conveyed immediately into both Receptacles from the Viſcera of Concoction through occult Paſſages, without any Alteration. But till thoſe Ductus's appear, it ſeems more likely to me, that from the Food taken into the Mothers Stomach, a Portion of the Chyle thence made is preſently abſorbed into the Veins, which having gotten the Vehicle of the Blood, and being brought by the Arteries into the Glands deſtinated here and there for receiving it before it is aſſimilated, and being ſeparated, is depos'd again from the Maſs of Blood.

Secondly, as to what regards the *Menſes*, ſuppreſt during the time of being with Child, and the *Lochia* plentifully flowing after Childbirth; we ſay, That after the *Fœtus* is conceived, the *Menſes* are ſtopt by Divine Appointment, becauſe their flowing often brings Abortion; and in regard the Veſſels are emptied by a continual Exſudation of the nutritive Juyce into the Parts of the Womb, the Maſs of Blood does not eaſily ariſe into Turgeſcencies to be appeaſed by a monthly

monthly flowing. For the ſame reaſon, the *Menſes* for the moſt part are ſtop'd as long as Women give ſuck to Infants: in ſome happily, endowed with a hot Blood, the *Menſes* flow both in the Time of their being with Child, and giving Suck; but that is wont to happen but rarely, and not without damage: tho in the mean time the *Menſes*, ſtopt while Women are with Child, becauſe far leſs of the nutritive Humour at that Time is imployed for Milk, deprave the Blood much more than the ſame are wont when reſtrained during the Time of giving Suck: nay, from thoſe being long ſuppreſt in the firſt State, a venemous Taint, as it were, is communicated to the Maſs of Blood; which, unleſs it be purg'd off, preſently after Child-birth, by a long flowing of the *Lochia*, it produces ſore and very malignant Affects; wherefore, to give my Opinion of the flowing *Lochia*, I ſay, that that Hæmorrhagie immediately proceeds from thoſe Veſſels being broken by which the *Placenta* ſticks to the Womb, and that by this way the Blood and excrementitious Humours, partly heap'd together about the Womb during the Time of being with Child, and partly flowing from the whole Maſs of Blood, are evacuated; to wit, whilſt the Womb, firſt ſwoll'n in a Bulk, falls preſently after Delivery, and is contracted into a leſs ſpace, the Blood is copiouſly expreſs'd from the Veſſels that are open in it. And moreover, in as much as during the Suppreſſion of the *Menſes*, the Maſs of Blood is imbued with very fermentative Particles, aſſoon as after Child-birth the Mouths of the Veſſels are open, preſently, as tho a large flowing of the *Menſes* were at hand, the whole Blood ferments, even as new Wine in a Bottle opened, and endeavours to purge from it ſelf the extream fermentative Particles, by a flowing of the *Lochia*, as it were, by an Efflorescence; and therefore, beſides the Blood, which in the firſt days, by reaſon of the Veſſels being newly opened, often flows forth pure; afterwards very diſcoloured Ichors, to wit, livid, or green, and thoſe very ſtinking, are voided forth. This kind of flowing is wont to continue for fourteen days at leaſt, nay, in ſome, for a month; and if by reaſon of any Errors it be ſtopt before the Maſs of Blood be cleanſed enough by ſuch an Efflorescence, preſently a very dangerous Fever, with a horrible Apparatus of Symptoms, is wont to be cauſed.

The third Conſideration, previous to the Doctrine of the Fevers of Women in Child-bed, chiefly concerns the Womb it ſelf; to wit, how it's affected after Child-birth, and what kind of Influence it has over other Parts of the Body. As to the firſt, there are two Accidents chiefly on which the acute Diſeaſes of Women in Child-bed much depend; firſt, the ſetling of the Womb, or the Reducement of it to its natural Site and Magnitude from the Bulk of Ingravidation: ſecondly, A Solution of its Unity within its Cavity, by reaſon of the Connexion of the *Placenta* being broken. When the *Fœtus* is depoſed with its Envellopings, preſently the ſides of the Womb it ſelf, before greatly inlarged, fall together, and contract themſelves by degrees into a

narrower ſpace, by the help of the Fibres: By reaſon of this kind of Contraction the Blood and Ichors are copiouſly expreſt from the Veſſels and Pores of the Womb, and are voided forth with the *Lochia*; but ſometimes it happens, by reaſon of preternatural things contain'd in the Womb, as are a part of the Secondine, a Mola, Clots of Blood, *&c.* even tho after a laborious Delivery, a Contuſion, or great Diläceration happen, that the Womb does not duely contract it ſelf, but the Motion of the Fibres being inverted, aſcends upwards, and is raiſed into a Lump; alſo the Membranes being affected with a Twitching, it is ſtill aſſail'd with Tortures, as tho the Throws of Child-birth were in being; which kind of Affects, if they continue for ſome time, by reaſon of the Orifice of the Womb being conſtringed with a Convulſive Motion, the *Lochia* alſo are often ſtop'd: hence ſevere Symptoms enſue; and oftentimes it happens, that a Fever either thereby is firſt raiſed, or being induc'd by ſome other cauſe, is rendred far more dangerous. Secondly, as to the Unity diſſolv'd by the *Placenta* being broken, it happens either at the due Time of Delivery, or when it is precipitated and over-haſty; and then the Secondine is thrown out entire, or being broken, part of it being left behind, it comes away as it were at halfs. If a Child-birth happens at the juſt time, and the *Fœtus* falls away entire, and without Violence, from the Cavity of the Womb, with its Envellopings, as ripe fruit from a Tree, the Mouths of the Veſſels are ſomewhat opened, that the *Lochia* flow moderately; and hence no ſevere Symptom is feared. But if the *Fœtus*, not yet ripe for Delivery, be torn away as it were by force, tho the *Placenta*, with the Membrances are torn away entirely, yet the Veſſels being broken, a great Hæmorrhagie, and at length the Mouths of the Veſſels gleeting forth a ſtinking Ichor, an ulcerous Diſpoſition enſues. And if part of the Secundine or the whole, ſticks to the ſides of the Womb after Delivery, and there putrifies, they gleet forth very ſtinking Ichors, and cauſe miſchievous Affects: oftentimes the Orifice of the Womb is ſhut, and retains within Clots of Blood, and pieces of Membranes, or Fleſh; which putrifying through Heat, Poyſon the Blood, and Humours flowing thither by Circulation from the whole Body, and by a troubleſome Irritation ſtir the Parts of the Womb, which are very ſenſible, into Contractions.

Since therefore, after Child-birth an Injury is brought on the Womb after the foreſaid Manners, the ſame is ſoon communicated to the other Parts, not without a Diſturbance to the whole Body; which is uſually done in a double Reſpect; for firſt, this happens, becauſe the *Lochia*, hindred from being voided forth, preſently reſtagnate into the Maſs of Blood, and defile it with a ſort of virulent Miaſm. Moreover, from the Contents putrifying in the Womb, either the Subſtance it ſelf of the *Ichor*, or the Particles departing from the cadaverous thing, are mix'd with the Blood and nervous Juice, paſſing through them, and in a ſhort

a short time infect their whole Liquours. Secondly, Hysterick affects are extended far and near by reason of the mighty accord there is betwixt the Womb and the Brain, with the Fibres and Membranes of the whole Body, by the means of the Conveyance of the Nerves: for when the extremities of the Nerves plac'd about the Uterine Parts are driven into Cramps and Convulsions by reason of the presence of the offensive Humour, the Convulsions there entred upon, presently being conveyed upward by the Efforts and Coarctations of the Nerves, creep toward the Brain: and so it happens that the Viscera are successively puft up, and violently convuls'd, and at length that the Brain it self is struck with it, and that its Functions are overwhelmed as it were: hence, upon convulsive Motions began about the Womb, a puffing up of the Belly and Hypochondres, a rumbling there, a Vomiting, a Belching, a straightness of the Præcordia, and a difficult Breathing, a sense of Choaking, and often a Stupor, and a loss of Speech, or at least some of these are caused: nor does the Tragedy wholly cease so, but the Brain being also offended by the continuation of the affect, the Injury is retorted thence on the other Parts, that often the whole *Genus Nervosum* is forc'd into Irregularities of Motions: for what is vulgarly said to be done by Vapours, and the affect, which creeping from below upward is called an ascent of Vapours, is nothing else, but the parts of the Membranes and Nervous ductus's forc'd successively into Contractions. Moreover, in these kinds of Affects the injur'd action does not always begin, or is first felt in that Region or Place, where the Injury is inflicted, nor do the Passions which are said to be hysterical only proceed from the Womb; for sometimes the disturbance is brought immediately on the Brain, but the Cramps and Contractions begin in the extream parts, and sometimes the extremities of the Nerves are twitched somewhere in the Viscera, suppose the Stomach, Spleen, Reins, no less than in the Womb; in which Irregularities arising, are continued in the neighbouring Parts, and thence into the Brain: from which again Convulsions are reflected unto other Parts, and often into the whole Body: that the thing is so in Women in Child-bed, and others that have Fevers, I have often observed: to wit, some by reason of the Womb being ill affected, and others by reason of the febrile matter fixt in the Brain by a critical metastasis fall into Passions in a manner hysterical: and these things being duely considered concerning the Apparatus previous to the Fevers of Women, in Child-bed, we need not stay here longer, only it may be observed that the Bodies of Women in Child-bed (especially those which are weak and of a tender Constitution) are very much debilitated after a laborious and difficult delivery, so that by reason of this sole occasion they easily fall into feverish distempers, and being caused this or another way, they bear them ill; now next let us speak of the Fevers themselves, with which Women in Child-bed are wont to be troubled:

of

of which affects three kinds as it were are vulgarly inſtanced. *viz.* the *Lacteal Fever*, *the Putrid*, or of that kind which is mark'd by ſome borrowed Symptoms, as eſpecially the *Pleuriſie*, the *Quinſie*, or the *Small Pox*, of which we ſhall ſpeak in order.

The Lacteal Fever.

I Am of Opinion that the milky Chyme made of the Aliments in the Viſcera, and thence mixt with the Blood for a Nutritive Juyce, is again preſently ſeparated, for the greateſt part, from its Maſs, by the help of the Glands in the Womb, or in the Breaſts, even as the Serum is in the Reins; that it might afford Nouriſhment to the Fœtus either in the Mothers Belly, or carried in her Arms. During the time of being with Child, tho the greateſt part of it be derived to the Womb, yet in the laſt Months, a little of it is depos'd in the Breaſts, but about the third or fourth day after Child-birth, the Milk is carried to the breaſts more plentifully, and as it were with a certain Impetus, that it ſoon fills them to a Tenſion, and begins to load them. At this time Women delivered (tho not all, yet moſt) are wont to be affected with a feveriſh Diſtemperature, a Thirſt, Heat, and Reſtleſſneſs of the whole Body: they complain of a ſad Pain in the Back and Shoulders, of a fulneſs of the breaſts, and a burning, and, unleſs the Milk be diligently drawn from thence, being heapt together too much, it often cauſes an Inflammation with a following Abſceſs in the breaſts: This Fever, ſo the *Lochia* paſs as they ought, ſeldom laſt above three days, but about that time, a copious ſweat ſpontaneouſly ariſing, is wont to be appeas'd: yet this Diſtemperature raiſed by the coming of the milk, is ſomewhat intended, and ſtays longer, if at any time the Milk being freeely entred into the Breaſts, be not drawn away, but be again repell'd thence; for upon its departure, even as upon its coming, a perturbation is wont to happen in the whole body, with a Thirſt and Heat, which alſo more certainly comes to paſs, if that happens to be violently driven away with repelling Topicks: but being driven from the breaſt by their help, or departing thence of its own accord, it is voided with the *Lochia* in the form of a whitiſh Humour, and a Sweat, or a full perſpiration exterminates the reliques of the Diſeaſe. But if by this kind of diſtemperature, being cauſed by reaſon of the commotion of the Milk, the *Lochia* are ſtopt, or errours in dyet are committed, or ſome evident cauſe happens, ſo that the effervescence of the blood be intended, often the *Lacteal Fever*, joyning to it worſe Symptoms, turns to a *Putrid* or *Malignant*.

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The Cure of this Fever is committed wholly to Nature, and as long as the *Lochia* are as they ought, it paſſes off for the moſt part well enough without any phyſical Help: for after an efferveſcence of the Blood, carryed on for three or four dayes, either a copious Sweat, or a free Tranſpiratious, reſolves this Affect: to wit, either the Particles of the lacteal Humour, degenerated in aſſimilating, or the aduſt Recrements remaining after the Deflagration of the Blood, or both of them together adminiſtring a Fuel to the Fever, are ſubdued by degrees, and evaporated forth, which being ſent forth, the Blood being become free from its extraneous mixture, ſoon recovers its former ſtate, tho in the mean while ſome vulgar Rules concerning the admiſſion of the Milk, or the driving away of the ſame from the breaſts, are wont to be obſerved. If the Milk ſprings into the breaſts in too great a plenty, then to prevent their Inflammation, and an immoderate efferveſcence of the Blood, let the dyet be thinn and ſpare, *viz.* of Broth without Fleſh, and in a ſmall quantity: alſo let the breaſts be emptyed by a frequent ſucking: if it be not convenient for the Mother to give the Infant ſuck, it is uſual on the firſt, or third day after delivery, to cover over all the breſts with gently aſtringent Cere-Cloths, as with the red Lead Plaiſter, *&c.* For ſo the ſpungy Subſtance of the Glands is ſomewhat conſtring'd, whereby they do not ſo readily receive the lacteous Humour flowing thither, tho this kind of Remedy ought to be cautiouſly us'd, leſt if the Milk be wholly excluded, or be driven away from the breaſts too much in a croud, preſently reſtagnating into the Blood, it cauſes a diſorder of the ſame; as a forerunner of a putrid or malignant Fever: of which we muſt ſpeak next.

The Putrid Fevers of Women in Child-bed.

WOmen in Child-bed, through the taint of their ill affected Body, as tho they were ſtruck with the Contagion of a peſtilential Air, are found to be extreamly obnoxious to a putrid or rather malignant Fever, tho all do not equally receive the taint of this Diſeaſe; for poor Women, Hirelings, Ruſticks, and others us'd to hard Labours, alſo Viragoes, and Whores, who are clandeſtinely delivered, bring forth without great difficulty, and in a ſhort time after, riſing from their Bed, return to their wonted Labours: but Women that are rich, tender and beautiful, and many living a ſedentary Life, as tho they partak'd of the Divine Curſe after a more ſevere manner, *bring forth in Pain*, and preſently after their delivery lye in an uneaſie and dangerous condition: the reaſon of which ſeems to lye in this, that thoſe that uſe much exerciſe, continually exagitate, and eventilate the Blood, and therefore after the Menſes are ſtopt, heap together

together fewer Miasms for the matter of the Disease; Moreover, labouring and active Women, having the nervous Parts more firm, are less subject to convulsive Motions, and the affects vulgarly called hysterical: on the contrary, in nice Women, and such as live idly, during the time of their being with Child the mass of Blood becomes impure and fermentative: moreover, because they have the Brain and the System of the Nerves tender and weak, upon any light occasion they undergoe Distractions of the animal Spirits, and disorderly Motions of the nervous Parts: and here it is to be noted by the by, that Women before Men, and some of that Sex before others, are troubled with the Affects called hysterical, not so much by reason of the fault of the Womb it self, but by reason of the weaker Constitutions of the Brain and *Genus Nervosum*: for in Persons so affected, Passions of Anger, Fear, Sadness; also all vehement or strong Objects easily pervert the Crases or Functions of those parts, which when they have been once injur'd, they afterward in a manner always accustom themselves to the same Irregularities. But to return whence we made a digression: the Fever even now mentioned is wont to infest Women in Child-bed, at various times, and for divers Occasions; sometimes it arises presently after delivery, especially if it has been difficult and laborious, sometimes the second, third, or fourth Week; tho the later it begins, the safer it it is wont to be; the Type of that effect passes after this manner: after a previous indisposition an open feverishness for the most part with a cold and a shivering makes the first invasion, which presently is followed by a heat, afterward a sweat ensues for a day haply or two, there are various reciprocations of Fits of heat and cold: afterward, the Blood being kindled throughout, the *Lochia*, unless suppress before, either flow a little, or wholly stop. If the Disease be acute, and of a quick motion, on the third, or fourth day it comes to its height, then there is an intense heat, with a very troublesome drought, a vehement and quick Pulse, there are obstinate Watchings, a great restlessness of the whole Body, so that the Diseased continually toss themselves this way and that in their Bed, the Urine is thick and ruddy, and other severe symptoms are rife: whilst the Fever is thus in its height, a Crisis is not to be expected; for I have never seen this Disease resolved by a critical sweat; nay, the case is very dangerous, so that after the Blood has boyl'd for some time, the adust matter presently being convey'd into the Brain, dangerous and very sore Irregularities of it, and of the *Genus Nervosum* straitway ensue, for convulsive Motions of the Tendons, wonderful distentions about the Viscera, and puffings up, resembling hysterick Passions, oftentimes are raised: Moreover, sometimes a Phrensy, a Delirium, often a Stupor and a Speechlessness also follow; almost in all the strength is suddenly cast down without a manifest Cause, the Pulse becomes weak and uneven, and the Diseased are often precipitated into Death: if any haply escape,

cape, either the flowing of the *Lochia* being reſtor'd, or a Diarrhœa ſupervening, they recover with much adoe after a long lying ill: I have known purple Spots to have appear'd in ſome; indeed in moſt the ſymptoms which regard either the Blood or the nervous Juyce, argue no ſmall malignity.

The *Procatarctick Cauſes* of this Fever, on which the malignity and mighty danger of this Diſeaſe depend, are chiefly two; *viz.* firſt, an evil diſpoſition of the Blood, after a long ſuppreſſion of the Menſes: ſecondly (after delivery) the evil affects of the Womb from the dangerous labours of Women (which make out the Divine malediction:) after the Menſes being long ſuppreſt, the Blood does not only grow turgid, and its ſulphureous parts being rais'd too much, are rendred more apt for Inflammation, but moreover, the maſs of Blood is imbued with very fermentative Particles, ſo that (as is hinted before) being ſtruck as it were with a venemous Miaſm, as it ferments, it forthwith is diſpos'd toward a putrefaction and corruptive irregularities, and beſides, it may preſently poyſon the nervous Liquour, and render it offenſive to the Brain and the whole *Genus Nervoſum*: this kind of taint communicated to the blood, ought to be purg'd forth by a copious flowing of the *Lochia*; but if after delivery the Womb be out of order, there is not only a ſtoppage of the *Lochia*, and ſo the Reparation of the whole blood is hindred, but beſides, ſtinking Ichors are thence tranſmitted to the blood, and greatly infect it. Alſo by reaſon of convulſive motions begun about the Womb, and thence continued to the other Parts, Irregularities are rais'd in the Blood and Juyces, which often conſpire to the production or exaſperation of a Fever.

The *evident Cauſes* which either cauſe an actual effervescence in the Blood, having gotten a Dyſcraſy, or trouble the whole Body with the Diſtempers of the Womb are divers; for theſe make a painful delivery, a ſolution of unity about the Womb, a contuſion, a retention of preternatural things, an ulcerous diſpoſition, and a great many other Accidents, which are caus'd through ſome neceſſity; but the occaſions in the power of Patients, and eaſie to be avoided, which are wont to raiſe this Fever, are chiefly two; *viz.* an ill form of Dyet, and a taking Cold. It's a uſual thing to give to weak Women after Child-birth, on the firſt and ſecond day, the Fleſh of Animals, or their Gelly-broths, and other Food very diſproportionate to their Conſtitutions; whence preſently an indigeſtion and great diſquietings ariſe in the Viſcera, and feveriſh turgeſcencies in the Blood, by reaſon of a nutritive Juyce richer than it ought. Beſides Errours committed in Dyet, often an Injury is caus'd, for that their Bodies, which are very tender, and by reaſon of the Labours of Child-birth, and the excluſion of the *Fœtus*, are all full of open Pores, are too unwarily expos'd to the open Air: for moſt, being impatient of their Bed, put on

their Cloaths, and riſe from it within a day or two, or ſooner than they ought: thereby preſently the Pores of the Skin being preſently ſtopt, and the Air getting into the Uterine Parts, tranſpiration is check'd, and often the *Lochia* are ſuddenly ſtop'd, either of which ſuffices to raiſe a feveriſh effervescence.

The *conjunct Cauſe*, or formal Reaſon of this Diſtemper, comprehends chiefly theſe three things; to wit, there are preſent, *firſt* a mighty Dyſcraſie of the Blood, that growing very hot from a Fever occaſionally rais'd, it does not burn evenly, nor does it ſubdue by degrees the aduſt Recrements, and purge them forth critically; moreover, the boyling Blood is preſently loos'ned in its Mixture, and its Texture being loos'ned, it declines toward Corruption; hence when it has a little abated of its Heat, the Spirits, being caſt from their Governance, are driv'n into Confuſion: mean while, the ſulphureous Particles become maſterleſs and exorbitant; wherefore the Strength fails without a manifeſt Cauſe, the Pulſe becomes weak and diſorderly. Tho from the Deflagration of the Blood a great many aduſt Recrements are heap'd together, yet nothing is duely concocted or ſeparated; but Nature being greatly oppreſt, altho the Diſeaſed continually ſweat, they often receive no eaſe thereby: but the Febrile Matter, which ought to be purged forth, being conveyed into the Head and *Genus Nervoſum*, cauſes there very ſore Perturbations of the animal œconomy. *Secondly*, The Tragedy of this Diſeaſe, for a good part of it, is aſcribed to the nervous Juyce forthwith turning ſharp, and therefore rendred diſproportionate to the Brain and its Appendix; for this being defiled with a Taint contracted from the Blood, does not gently irrigate and mildly inſpire its Subjects, but (as when an Infuſion of Vitriol is pour'd on a Worm) mightily vellicates, and irritates into Contractions, and as it were into Motions of Trepidations and Leapings thoſe tender Parts, and ſometimes wholly overthrows their Functions: hence Contractions, ſevere Convulſions, a Delirium, Watchings, ſometimes a Stupor, and ſleepy Affects, happen to Women after Delivery. *Thirdly*, whilſt theſe things are done, often a third Troop of Symptoms infeſt the Diſeaſed; to wit, for that the Womb, being ſome way hurt, moves it ſelf diſorderly, and is ſtruck with a Contraction in theſe or thoſe Parts; thence preſently by the Membranes and nervous Ductus's convulſive Motions pervade the whole Region of the Abdomen, wherefore the Viſcera and Hypochondres are blown up, Belchings and violent Vomitings are raiſed; afterward the Affect creeping upward, and poſſeſſing the nervous Parts of the Thorax, a difficult and uneven Breathing, a Palpitation of the Heart, a ſenſe of Choaking in the Throat, by reaſon of the Muſcles there drawn together, and other Symptoms are raiſed throughout the whole, upon the ſame Injuries being communicated to the Brain.

The

The Fevers of Women after Delivery, are ſcarce ever free from danger, tho ſometimes it happens for them to be cur'd about the firſt beginnings, by a thin Diet, and upon reſtoring the flowing of the *Lochia*: but if the feveriſh Diſtemper has laid deep Roots, that the Blood be wholly kindled, and boyls immoderately, we can give but an ill Prognoſtick; and there will be a greater Cauſe of Danger, if beſides a Heat diffus'd through the whole, the Diſeaſed are ſeiſed with a frequent Shivering, if they are affected with a great Reſtleſſneſs, and Watchings, with ſudden Concuſſions of their Bodies, or Contractions of the Tendons: if on the third or fourth Day they complain of a ringing of the Ears, with a great Repletion of the Head, you may preſently gather, that a great Evil is at hand, to wit, a Metaſtaſis of the febrile and offenſive Matter into the Brain; nor is leſs to be feared if there lyes an Oppreſſion and Load on the Præcordia that the Diſeaſed cannot freely breath, nor draw their Breath deep, nor from the bottom of the Thorax; but only from the upper part of it, and that ſhort and with a Blowing, ſo that in the mean while the Diſeaſed are forc'd to ſit upright, and to move themſelves this way and that, after a reſtleſs manner; for this argues the Blood to ſtagnate about the Heart and Lungs, alſo that it is apt to grow clotty, and to be coagulated: and if worſe yet Affects of the Brain and *Genus Nervoſum* enſue, and the Pulſe becomes weak and uneven, you may declare the Caſe to be deſperate: but if (as it ſometimes falls out, tho rarely) after a Fever is kindled, and threatens ſeverely, either a flowing of the *Lochia*, or a Diarrhœa happens with Relief, ſome Hope may be admitted.

Concerning the *Cures* of theſe kinds of Fevers, a Phyſician has a very hard Task; becauſe, among the Vulgar, all Medicines to Women in Child-bed are accounted not only uſeleſs, but likewiſe very hurtful; wherefore, Phyſicians are ſeldom called, but when there is no place left for Medicines, and the occaſion for a uſeful Aſſiſtance is wholly paſt: and if they are preſent about the firſt beginnings of the Diſeaſe, it will not be an eaſie thing to procure Health to the Diſeaſed by vulgar Remedies; and whatſoever they try, unleſs it gives Help, is affirmed by old Women, and thoſe that are about them, as pernicious, and the only Cauſe of their Death: that in reality, there is wont to accrue to us about the Cure of no Diſeaſe, leſs benefit and more Diſgrace than of this.

Now the *method of Cure* (even as in contagious Diſeaſes) is twofold; to wit, *Prophylactick* and *Therapeutick*: the former of theſe delivers Precepts and Cautions, with which Women in Child-bed are preſerved from the Incurſion of Fevers; the other ſuggeſts curative Intentions, with which the Diſeaſed (if it may be) recover again their Health.

1. Tho this Fever, however malignant it be, is not accus'd of Contagion, and there be no fear in thoſe that lye in, of a venemous Miaſm being received from without; nevertheleſs, all Women in Child-bed

have an innate Minera of Virulency, and ought to have a care of the miſchief of this, as a Fomes of a mighty Malignity; wherefore they have need of an exact Governance, that after Child-birth the *Impurities of the Blood* and Humours *may be duely purg'd* without the danger of a Fever; and that the *evil Affects of the Womb be healed*; and that the *Strength*, *broken* and *debilitated* by Child-birth, may be duely *reſtored*. For theſe ends, theſe *three things* are to be chiefly inculcated in the Præſcripts of Phyſicians: *Firſt*, I think it neceſſary that a moſt exact form of Diet be ordered Women in Child-bed; to wit, that at leaſt for a Week they wholly feed on Oat Broths, ſometimes prepar'd with Ale, ſometimes of Water mixed with White-wine; becauſe they are much emptied, therefore they may ſup often of them; but let nothing of a ſolid or ſtrong Food be given; for I have diligently obſerv'd that an over-haſty eating of Fleſh, or of a rich Food, has oftentimes brought theſe Fevers. For, Women in Child-bed ought to be managed not only as Perſons ſorely wounded, but as having gotten a feveriſh Indiſpoſition from a troubled Craſis and Diſtemperature of the Blood; for in them, the Blood being for a long time too much exalted and inſpired with an impure Miaſm, preſently upon the Acceſs of any ſulphureous Fuel, takes a light Flame. The *ſecond* Care, after Diet, muſt be, that the Pores be not clos'd, or the *Lochia* ſtopt, upon the unwary Admiſſion of an outward Cold; for upon the lighteſt occaſion, the way of the Tranſpiration being chang'd, the Blood, before fermenting, falls into Diſorders, alſo the Womb being touch'd with the breath of the Air, contracts it ſelf, and cloſes the Mouths of the Veſſels, that the Lochia do not flow: wherefore in any wiſe Women ought to be kept in Bed five days after Child-bearing. I know its the vulgar way to take Women out of Bed the third day, but I have known many to have fall'n into Fevers thereby; and in truth, if we will have Child-bearing Women ſecure from danger, the ſafeſt way will be, to keep them in Bed longer. There remains a *third* Scope concerning Preſervation, that in Women in Child-bed, by giving ſomewhat gently to ſtir the Blood, we continue a flowing of the Lochia: for this end Midwives are wont (if at any time after a difficult Child-birth that Evil be fear'd) to give *Sperma cæti*, Powder of Iriſh Slate, or Saffron ſteep'd with White-wine: moreover, to prepare Broths, that they may fuſe the Blood more, of Water mixed with White or Rheniſh Wine, in which, or alſo in Whey, they boyl Marygold-flowers, Penny Royal, or Mugwort. There are a great many other kinds of Adminiſtrations in uſe for Women in Child-bed, which I willingly paſs by, as being vulgarly known.

The Cure of the Fever following Child-birth far differs from the Method uſed in Putrids: for in that it is not to be expected that the Blood being ſtruck with a Febrile Burning, ſhould burn on by degrees and then ſhould ſubdue the aduſt Recrements heap'd together by degrees

grees in its Boſom, and ſhould ſeparate the ſame by a Criſis; but rather (as is beſt done in a malignant) aſſoon as the Blood boyls immoderately, it is good to exagitate it, and to ſend forth its hæterogeneous and impure Mixtures by Remedies gently promoting Sweat; wherefore it is uſual among the Vulgar (and that not amiſs) to give preſently Sudorificks to Women in Child-bed that are feveriſh: by this means the Blood being eventilated, its Effervescence is appeaſed; alſo by reaſon of its Agitation, the Lochia, apt to be reſtrained, are ſtimulated to a flowing. It is much diſputed among Authors whence the Beginnings of theſe kinds of Fevers ought to be computed; to wit, Whether from the Birth it ſelf, or from the firſt Senſe of the Feveriſhneſs: but it little matters whether it be concluded this way or that; for, ſince this Fever does not juſtly obſerve the wonted Stages of Putrids, nor is to have a Criſis, nor at all admits the uſe of a Cathartick Remedy, there is no cauſe for us to be any ways ſollicitous concerning its Period or Menſuration as to days: but it will be only uſeful for us to diſtinguiſh concerning its curative Indications, of what things are to be done in the Beginning, Encreaſe, and End of this Diſeaſe; what alſo we ought to attempt while the Strength holds ſomewhat good; and what in the ſame being depreſſed and greatly dejected.

When therefore any Woman brought to Bed is firſt affected with this Fever (whoſe Invaſion is diſtinguiſhed from the Lacteal, becauſe it begins for the moſt part with a cold Shivering) preſently we muſt endeavour that the Fewel be plentifully withdrawn from the burning Blood; and, as I have adviſed above, let the Fleſh of Animals, or Broths made of the ſame, be wholly forbidden: for theſe fix the Blood, and conſtipate it too much, and hinder its purging, which is very neceſſary both by the Lochia, and by cutaneous Tranſpiration: and rather, tho the Fever be preſſing, let Decoctions, Powders, and Confections, be given of moderately hot things: of this kind (as I ſaid before) are the Decoctions, or diſtilled Waters of the Flowers of Marygolds, of the Leaves of Penny-royal, of Mugwort, of the Roots of Scorzonera, alſo bezoartick Powders, Spirit of Harts-horn, the fixed Salts of Herbs, *&c.* If the Lochia are ſtopt, we muſt try all ways to move them to flow again; for promoting theſe, Frictions conduce, and Ligatures about the Thighs and Legs, alſo in the Soles of the Feet, ſometimes cupping Glaſſes, or Veſicatories about the Thighs, or Hips, alſo in the Soles of the Feet; ſometimes alſo Blooding in the Ancle is good: mean while, let a Fomentation of an hyſterick Decoction be applyed about the Share, or let a Weathers Caul, taken forth warm, be laid on the lower Part of the Belly: it has been found by Experience, that Peſſaries, and uterine Injections, have ſometime done good; if the Belly be coſtive, let it be gently looſned by the Violet Suppoſitory, or an emollient Clyſter. We muſt beware of a too ſtrong Irritation, becauſe it is known, that in Child-bed the Strength is ſuddenly

denly cast down, with a Swooning, by a copious Purging, even as in a Malignant Fever. If at any time, with a Suppression of the Lochia, there be a mighty Perturbation of the Blood with a Vomiting, a Thirst, and Watchings, I have often known Laudanum mix'd with Saffron given with good Success. Instead of a cooling Julep, this kind of Mixture may be proper: viz. *Take Water of Penny-royal, and of Bawm, of each three ounces, Hysterick-water two ounces, Syrup of Mugwort an ounce and a half, Tincture of Saffron two drams, Castoreum tyed in a Rag and hung in the Glass a Scruple.* Mix them. Let three or four Spoonfuls of this be taken divers times in a day.

2. If, notwithstanding the use of these kinds of Remedies, the Fever still grows worse, and is increased by degrees with a worse Apparatus of Symptoms, so that besides the Disorders of the Blood, the Brain and nervous Parts begin to be affected, Medicines, tho a great many of them of every kind are tryed, oftentimes can do nothing: nay, in this case, the Indications are in a manner coincident with those that are to be made use of in the Plague it self; for, the Lochia being a good while suppress't, they cannot easily, or scarce at all, be brought again in a great Confusion of the Blood and Humours: therefore it is good quickly to raise a Sweat; to wit, That the Corruptions made in the Blood and nervous Juice, and restagnating from the Womb, may in some sort be sent forth by Sweat and insensible Transpiration: wherefore here *Bezoartick Powders and Confections, Spirit of Harts-horn or of Soot, Tinctures of Coral or of Pearl*, conduce. I have sometimes seen, that by the help of these kinds of Medicines, in a desperate Case, somewhat of Hope has shewn it self, the Pulse and other Symptoms promising a little better; tho the Cure has seldom succeeded: but when that use of Cordials was remitted, the Diseased fell headlong into Death, with a weak Pulse, and a Loosness forthwith arising.

3. When still the case of the Diseased grows worse and worse, that the Fever being increased, the Pulse is weak and uneven, and frequent Shiverings, and convulsive Motions infest the whole Body, with a Delirium, or a Stupor; then let the Physician, first giving a Prognostick of Death, insist on fewer Remedies, and those, in a manner, only Cardiack: and let him wholly abstain from Blooding, Scarifying, Vesicatories, or the use of Cupping Glasses; for such Administrations bring only an Ill-will and Disgrace, that thereby we are accounted by Women hard-hearted and cruel.

The

The Symptomatick Fevers of Women in Child-bed.

THE acute Diſeaſes of Women brought to bed do not only follow the Type of the foreſaid Fever, but are ſometimes attended with ſome notable Symptom; to wit, the Quinſey, Pluriſie, Peripneumonia, Dyſentery, Small Pox, or of ſome other kind; and then they are call'd by the Names of thoſe Affects. It is not proper to repeat in this Place what belongs to the Natures and Eſſences of each of them at large, but I ſhall briefly ſet down what thoſe Diſeaſes, complicated with the Affects of Women in Child-bed, have peculiar to them, as to their Cauſes or Cures.

We judge that all thoſe Symptoms proceed from a certain Coagulation of the Blood, and afterward its Extravaſation: now while the Blood is extravaſated in one part, every natural and critical Efflux of it is reſtrain'd in another; wherefore there is danger, leſt while the Blood begins to be coagulated either in a particular and uſual Focus of Congelation, or univerſally in its whole Maſs, preſently the flowing of the Lochia be ſtopt; which in reality happens for the moſt part, and therefore thoſe Affects are moſt commonly mortal to Women in Child-bed: nevertheleſs, the Cauſe of their Death, for the moſt part, happens with ſome difference, to wit, in the Small Pox, the flowing Lochia call inward the Malignity began to be ſent forth outwardly, and wholly poiſon with their Taint the Maſs of Blood and the Heart it ſelf; and therefore in the Small Pox thoſe uterine Purgations ought to be ſtopt: but in the *Pleuriſie*, *Quinſey*, and the reſt, when the Stimulus of the Diſeaſe, fix'd here or there in a particular Place calls to it ſelf, and wholly derives from the Womb the Impurities of the Blood which ought to be voided by the Lochia, thereby it increaſes the Taint of the Blood: the Lochia reſtrain'd in the Small Pox might be ſent forth by a more general way of Excretion, with the venemous Particles of the Diſeaſe; which indeed does not ſucceed in the reſt by reaſon of the ſmall and more ſpare way of Excretion.

Among theſe, the *Quinſey*, *Pluriſie*, and *Peripneumonia*, by reaſon both of the great likeneſs of their Cauſe, and the Analogy of their Cure, may be conſidered together. When a Woman in Child-bed is affected with either of theſe, it is to be judg'd, that beſides the Miaſms heaped together during the time of Ingravidation, there happens a certain acid diſpoſition of the Blood, by the means of which, whilſt it feveriſhly boyls, certain Particles of it being imbued with a ſharpneſs, fall into a Congelation in this or that place, like Milk turning ſour and conſequently coagulated: the Blood letted there, and hindred in its Circulation, hinders the Paſſage of the reſt; now the Blood, being obſtructed in its Motion, buts againſt its dam, and ſo being heaped toge-

together round about, and driven out of its Veſſels, grows into a Tumour; thence preſently whatſoever hæterogeneous and ſeparable is contained in its Maſs, is depoſed in the Part affected as in a Sink: wherefore, the Corruptions of the Blood, which ought to be purg'd forth by the Womb, are deriv'd thence toward the Seat of this Diſeaſe; which ſince they cannot be purged forth ſufficiently this way, both the Liquor of the Blood is more notoriouſly corrupted, and a Criſis of that particular Affect, to wit, of the *Quinſey*, *Pluriſie*, or *ſome other*, is rendred more difficult.

For the Cure of theſe kinds of complicated Diſeaſes, preſently from the very firſt beginning it muſt be endeavoured, that the Blood fixt any where and begun to be extravaſated, be reſtor'd to Circulation, and do not make an Impoſtume, becauſe it is very rarely that Women in Child-bed, ſeiſed with thoſe ſymptomatick Fevers, are cured by an Abſceſs or ſpitting forth of the Matter; wherefore, inward Remedies, which fuſe the Blood and free it from Coagulation, are to be uſed; of which kind are chiefly Diaphoreticks filled with a volatile Salt, as Spirit of Harts-horn, of Soot, of Urine, and the Salts themſelves: alſo teſtaceous and bezoartick Powders, Sal Prunella, Decoctions and Juleps of Vegetables promoting the *Menſes* or the Urine; in all which thoſe things ought to be mixt, which by Experience are found to be appropriated to uterine Affects: moreover, diſcuſſing Remedies, which drive away and expell the Matter ſtinking in the Part affected (of which kind are Liniments, Fomentations, and Cataplaſms) are carefully to be applyed to it. Mean while, let the violent Motion, and immoderate Effervescence of the Blood be removed far from thence, and let its Excretions of Filth be conveyed ſtill to the lower Parts, by what ways we may: for this end, Frictions, Ligatures, Epiſpaſticks, and (if need be) cupping Glaſſes, may be applyed to the Feet or Legs: in caſe the Affect growing very much worſe, blooding be indicated; unleſs there be a great Plethora in the whole Body, and a very acute Inflammation in the Part affected, it will be beſt to breath a Vein in the Foot, or to open the hæmorroid Veſſels with Leeches: but if neceſſity preſſes for it to be done in the Arm, after Blooding there, let another Bleeding (if it may be admitted) follow in the Leg: nevertheleſs, we muſt give a Hint, that opening a Vein ought to be very cautiouſly ordered in theſe Caſes: for unleſs it gives Relief (which I have ſeldom known to happen) preſently the Pulſe being rendred more weak, the State of the Diſeaſed becomes worſe.

A *Dyſentery* takes its Riſe in a manner from the like Cauſe, as the foreſaid Affects; but becauſe in this, the extravaſated Blood is preſently poured forth, nor being reſtrain'd in the Body creates a miſchief there, and is ſtill more corrupted: and ſince this way of Excretion is performed near the uterine Efflux, and does not derive it afterward another way, hence leſs danger is feared from this Diſeaſe than from

from the others before mentioned; tho oftentimes this Affect is mortal to Women in Child-bed, and that the rather, because by a Dysentery things that qualifie and gently astringe the Blood are indicated: and these are found too apt to stop the flowing of the *Lochia*: wherefore in this case, till Women delivered are in a manner purg'd enough by a long flowing, let the Cure of the other Disease be omitted, and let the fierceness of Symptoms be restrain'd only by lenifying things.

The Indications of the *Small Pox* do not only differ from those ev'n now above described, but are attended by some Contrary to themselves; for they require the Flowings of the *Lochia* to be a little stopt, (as is said before;) tho withal, that the Efflorescence of the Blood, and a gentle Sweat, be continued: for since in this Disease there is a double venemous Ferment, and the corrupted Particles of the Blood are carried forth two ways, Care is to be taken that the less and narrower Passage do not draw to it self all the Matter, or more than it can let forth: therefore, lest the *Lochia* too copiously flowing draw inwardly the Venom, which is apt to make an outward Efflorescence, the form of Dyet must be somewhat chang'd; and in the first place let things be boyled in the Broths of the Diseased, which have an Alexipharmick together with an astringent Vertue (as the Roots of Tormentil and of Bistort,) also it is good to give at due Intervals of time, Powders, Juleps, and Opiates, endowed with such a kind of Vertue: moreover, in this Case let it by no means be allowed Women to feed on Flesh and Broths made of it, or to rise from bed; but a quiet both Mind and Body being procured by what means we may, and a Diet being ordered of those things which do not exagitate the Blood, let the business in a manner wholly be committed to God and Nature.

It were an easie thing to illustrate with Stories and Observations what is said above concerning the acute Diseases of Women in Child-bed; but the Examples which may be brought in this kind, are for the most part deplorable and of an ill Event; for those Fevers generally are terminated in Death. Now to describe these kinds of Sicknesses will neither confirm the Endeavour of a Physician, nor at all recommend the method of Physick used in them; however, since the Knowledge of these makes for the better Diagnostick of that Disease, I shall here propose certain singular Cases and Varieties of Symptoms of Women after Delivery; in which, tho Forms and ways of curing seldom occur, at leastwise you will have certain Rules of Precaution of no contemptible use.

A renowned Woman about twenty six years of Age, was delivered of a sixth Child with great difficulty, and not without danger of Life. On the second day, she ate a whole Chicken. On the third, being taken up from her Bed, she sate for four hours in a Chair. The night following she was ill, at which time the Milk sprang into her Breasts; which ne-

vertheleſs ſoon diſappeared upon the Application of the *Diachylum* Plaiſter. The next Morning ſhe complained of a Laſſitude, and a Pain like a Soreneſs of her whole Body, alſo of a Vomiting, a Nauſeouſneſs, and a Plenitude about the Ventricle and Hypochondres: a very troubleſome Night followed. On the fifth day ſhe was more openly feveriſh, and felt ſometimes a Shivering, ſometimes a Burning all about her. She nauſeated all things, had an Oppreſſion of the Stomach, moreover, being reſtleſs, and without Sleep, the *Lochia* flowed but little, but a whitiſh Humour (vulgarly call'd a flowing of Milk) flow'd from her. In the Evening ſhe had a heavineſs about the Fore-head and Temples, as tho ſhe were ſleepy, and began to ſleep a little: after an hour and a half, awaking with a troubled Fancy, ſhe complain'd of her Head being increas'd as it were to a mighty Bulk, alſo of her Jaws being cloſed that ſhe could not open her Teeth, and of her Fiſts being cloſely contracted; moreover, in her whole Body ſhe ſeemed to perceive a pungitive ſort of a Stupor: the Ventricle and Hypochondres continued ſtill diſtended and puffed up. To this Perſon Frictions, Ligatures, cupping Glaſſes, and other Remedies, both inwardly and outwardly, were applied for recalling the *Lochia*, and deriving the Recrements of the Blood from the Head: the weak and diſorderly Pulſe did not admit Blooding: Powders and Juleps for gently moving a Sweat, and fuſing the Blood and nervous Juice, and hindring them from Reſtagnations, were diligently given. Moreover, Fomentations ſometimes of linnen Cloths dipt in an emollient Decoction, ſometimes of the tepid Viſcera of Animals were applied to the lower Part of the Belly; mean while, ſtinking things (as is wont to be done to Perſons troubled with hyſterick Fits) were held to the Noſtrils, for hindring the impetuous flowing of the Blood and Spirits to the Head. Now theſe things and others being carefully plyed for many Hours, ſhe ſeemed to perceive ſome eaſe, tho ſhe ſtill dreaded of cloſing her Eyes, or preparing her ſelf for Sleep; for, her Eye-lids being cloſed, a thouſand Phantaſms came into her Head, with a noiſe, and a ringing in her whole Head. She paſſed the Night almoſt without Sleep; aſſoon as ſhe began to ſlumber, preſently being frighted, and being oppreſt in the Præcordia, ſhe awaked. On the ſixth day, about Noon, ſhe had a cold Shivering, with a ſtrong Concuſſion of the whole Body; to which, as in the Fit of an Intermittent Fever, preſently a Heat, afterward a copious Sweat ſucceeded, tho no Relief hapned to the ſick Perſon thereby: for preſently after the Sweat, the feveriſh Heat renewed, and convulſive Affects more infeſted her. The Night following, when alſo the other Symptoms grew worſe, a Palſie was raiſed firſt in the Tongue, and then preſently in the Throat, that ſhe could not ſpeak, and ſcarce at all ſwallow. On the ſeventh day, about the ſame Hour, a cold Shivering again, with a Heat and a Sweating, ſeiſed her, and thenceforward the Pulſe was far weaker and uneven; alſo a difficult Reſpiration,

tion, with ſhort Breath, ſeiſed her; ſhe knew not the Standers by. On the eighth day ſhe dyed.

Many Occaſions concurred to the Death of this Woman, prediſpos'd to a Fever by reaſon of her Ingravidation, they greatly increaſing the Malignity of the Diſeaſe; for, the hurting of the Womb through the difficult Delivery, the ſudden ſtriking of the Milk from the Breaſts, the eating of Fleſh, and the too quick riſing from Bed, all concurred, as tho conſpiring together, for a greater Miſchief. The Blood taken with a feveriſh Burning began Diſorders: it drew the *Lochia*, and haply other Corruptions of the Womb, into it ſelf, and thence acquir'd a greater Taint and a wholly venemous Diſpoſition; the Membranes of the Viſcera, whether upon their being fill'd with a degenerate nervous Juyce, or upon Contractions being communicated to them from the Womb, were ſtruck with convulſive Motions: for thoſe kinds of Inflammations and Diſtenſions about the Abdomen, are really the Effects of Convulſions: for tho the direct Fibres contracting that Member, often compreſs it, yet when the Fibres both ſtreight and tranſverſe, and others placed in a various Site, are convulſed together in the Membrane compaſſing about the Cavity, part of it ſwells like a blown Bladder, into the Vacuity of which the Air ſecundarily paſſes it ſelf. So far it is from what is vulgarly ſaid, *viz.* That the Air, or *Flatus*'s firſt heap'd together there, are the Cauſe of the Diſtenſion. In our Sick Perſon the Blood growing hot, and ſoon being full of an aduſt and malignant matter, preſently, it being incapable of being ſubdued, and ſeparated by Sweat, endeavoured to fix it in the Brain; the firſt diſcharge of that Matter on the Head, by reaſon of the Animal Spirits being half overwhelmed, brought the Senſe of the Heads being very much increaſt in bulk; which happens after the like manner, as when the Foot, being ſeiſed with a Stupor, ſeems to be felt much greater than it ſelf: now that after ſome eaſe, by ſlumbering, and cloſing the Eyes, the Affect return'd anew, the Reaſon is, becauſe Watching, and the ſtirring of the Senſes, in ſome ſort ſhake off and remove from them the Matter beſetting the Brain and Nerves; which nevertheleſs, being ſeated near, and in a Readineſs, Sleep ſtealing on, is as it were imbib'd by them, and throughly enters their Bodies together with the nutritive Juice. Now the Blood, tho it had copiouſly diſcharged the Recrements on the Brain, yet it became not free it ſelf; but being ſtill full of an impure Load, fell as it were upon a critical Efflorescence, and with a Shivering, followed by a Heat and a Sweat (as is uſual in a great Excretion) it tryed again and again to ſhake off its Burthen; tho all it could do by that Effort was, that the Matter ſticking to the Brain got deeper Root in it, and fixing it ſelf in certain Sprouts of the Nerves, it took away Speech, and Swallowing, and then afterward Senſation; and the Maſs of the Blood being deprav'd more and more by degrees, at length it became unable for ſupporting Life.

A Renowned Woman, Married a little under Twenty, being with Child, and during the time of her Ingravidation having uſed but little Diet, and almoſt no Exerciſe, underwent in her Travail Pains and Throws, but with Intermiſſion and a frequent Reſpite, for twelve Hours, and brought forth a Son; the *Fœtus* came away with the Secundine, and all things were well about the Womb. On the firſt and ſecond days ſhe was indifferently well, but on the third, after a light Shivering, ſhe began to complain of a Thirſt and a Heat; which a Looſneſs followed, ſo that ſhe had four Stools that day; the Night paſſed in a manner without Sleep, the feveriſh Diſtemper continued afterward for two days after the ſame manner; ſhe daily had three or four Stools, the *Lochia* as yet flowing moderately. On the ſixth day, when by the Perſwaſion of Women ſhe had taken ſomewhat for moderating her Looſneſs, the Purgings of the Womb were in a manner wholly ſtopt: at which time, the Fever became more intenſe, and Symptoms reſembling Hyſterical aroſe; for, in the Præcordia ſhe had great and frequent Oppreſſions, and had a ſenſe of Choaking in the Throat. On the ſeventh day, there was a more intenſe Heat, and a difficult and more painful Breathing; and then by a Phyſician's Order, at that time firſt call'd, three ounces of Blood were drawn from the Foot, after which, for four Hours, ſhe was better; for a quiet Sleep, with a copious Swear, enſued, the *Lochia*, tho in a ſmall quantity, appear'd again: in the Evening all things grew worſe, the Strength being very much reſolv'd, the Pulſe became weaker, and uneven; ſhe complain'd alſo of a Noiſe and a ringing of the Ears, with a Plenitude of the Head, moreover ſhe had Leapings of the Tendons in her Wriſts, alſo ſudden Convulſions of the whole Body, and ſtill the Looſneſs troubled her. To this Perſon Cordials and other Remedies and kinds of Adminiſtrations diligently uſed by the Preſcripts of many Phyſicians, did not the leaſt good; the pulſe growing weaker, and the Strength decreaſing by degrees, on the ninth day after Delivery ſhe died.

This Fever depended very much on the vicious Diſpoſition of the Body, as on the procatarctick Cauſe; for I have often obſerved, that it falls out ill with Women in Child-bed, who when they are with Child, unwholſomly feed on fruits and any ſorts of food, and living without Motion and Exerciſe, indulge themſelves only to Idleneſs and Reſt: the Blood, by reaſon of the previous Cachexia, without any evident Occaſion, fell a burning as it were of its own accord; now whilſt it boyled, depoſing its Recrements and Impurities ſtill inward, it brought the Looſneſs: nor did its Maſs become more pure from that almoſt continued Excretion, but its Mixture or Craſis being ſtill more depraved, at length the Blood fell wholly from its genuine Nature, and became uncapable of fermenting in the Heart: the Looſneſs naturally hap'ning was ill ſtopt, eſpecially by the uſe of Aſtringents; for I have often obſerved, that theſe things are not attempted without danger:

for

ſer a Looſneſs has cured ſome that were ill, and in that Lady, and in many others (as we have ſufficiently found by Experience) tho it did not take away the Fever, yet it freed them from the more ſevere Affects of the Brain and *Genus Nervoſum*; whence this Diſeaſed was wholly without a Delirium, nor was ſhe ſeiſed with convulſive Motions, till ſhe was brought almoſt to the laſt.

A worthy Matron about thirty ſix Years of Age, going with Child the ſeventeenth time, was very ſad, and perplex'd with Thoughts that ſhe ſhould dye in Child-bed upon her Delivery: but (as it pleaſed God) ſhe was very well delivered of a Son, and was chearful for three days after. On the fourth day, having eaten more of a Chicken than ſhe ought, a little before Night ſhe fell into a feveriſh Diſtemper, with a Vomiting, and the *Lochia* were ſtop'd: all the night ſhe lay without Sleep and reſtleſs; the next Morning, within an Hours ſpace ſhe had four Stools, and ſeem'd to be reliev'd; about Noon (at which time I came) ſhe complained again of a Heat and a Drought, alſo of a Palpitation of the Heart, and of the Aſcent of a certain heavy thing in her Throat; the Pulſe was quick and ſmall, the Urine was ruddy, the *Lochia* ſcarce appeared. I ordered that Cordial Juleps, and things moving a Uterine Purgation, ſhould be given to this Perſon; moreover, That Fomentations ſhould be applyed to the lower part of the Belly, alſo that the Legs and Feet ſhould be often rubbed with warm Cloaths: at the time for Sleep, I gave her *a Grain of Laudanum, with half a Scruple of Saffron powdred in a Spoonful of Treacle Water.* She ſlept quietly, and the *Lochia* flowed plentifully, afterward, uſing a thin Diet, and things gently promoting a uterine Flux for a few days, ſhe perfectly recovered.

A Noble Woman, Young, and Handſome, had a good eaſie Deliverance of a ſecond Daughter, and for ſix days being well as to the *Lochia* and other Accidents, ſhe was wholly free from the Suſpicion of any Diſtemper; ſhe daily ate Fleſh, and being taken forth of Bed ſhe lived chearfully in her Chamber. On the ſeventh day, without a manifeſt Cauſe, ſhe had a Shivering, with a Fever, and the *Lochia* were leſſened, tho not ſuppreſt. To the tenth day after her Delivery, being only gently feveriſh, and the Purgings of the Womb ſtill flowing, ſhe liv'd free from any ſevere Symptom; but then, tho very feveriſh, ſhe ſeemed more chearful than uſual, and more confident of her doing well; in the night ſhe ſlept little or ſcarce at all; the morning following (at which time I firſt viſited her) ſhe was manifeſtly delirous, the *Lochia* were ſtopt, and the whole Body was in a Shivering, the Tendons in the Wriſts were convulſed, ſo that her Pulſe was ſcarce to be diſtinguiſhed; which in the mean while was weak, uneven, and very quick. I declar'd, That this Perſon, unleſs the Hand of God unexpectedly delivered her, muſt dye in a ſhort time; however, ſix Grains of Oriental Bezoar being given in a Spoonful of a Cordial Julep, and

cau-

cauſing a copious Sweat with a better Pulſe, and afterward other Cordials given at due Intervals, gave ſome hope of doing well, tho doubtful, and not to be relyed on. After four Hours after I came, being in a languiſhing Condition, ſhe had a very large Stool, then preſently her Strength wholly fell, and within an hour and a half ſhe died.

A Woman of Quality, ſcarce exceeding twenty Years of Age, of a florid Countenance, and a thin Body, the *Lochia* flowing immoderately after Child-birth, uſed certain aſtringent Remedies by the Advice of the Attendants, whereby they were wholly ſtopt: but a Looſneſs followed; which increaſing for three days, the Women gave her other Remedies to ſtop the Looſneſs, nor were they fruſtrated of Succeſs; mean while they brought a dangerous Fever, and Affects as it were hyſterical in the place of the former; for the unfortunate Woman in Child-bed was affected with a Thirſt, and a Heat, with Watchings, afterward with a frequent Swooning, and cold Sweats. Being called at this time, I ordered Cordial Remedies, and things to promote uterine Purgations to be drank, and likewiſe a Clyſter to be injected; the Looſneſs of the Belly being again procur'd, the *Lochia* alſo came down, and the Diſeas'd being freed from the foreſaid Symptoms, and the more ſevere Diſeaſe, *viz.* the Nurſes Remedies, ſoon recovered from her Fever.

Here let it be obſerved by the By, that it's very dangerous either to ſtop, or to alter, or to thwart any Motion raiſed by Nature, tho anomalous.

A Woman of Note, about twenty years of Age, of a full and well-fleſh'd Habit of Body, aborted twice within a Years ſpace; when afterward ſhe had conceived with Child, by her Phyſician's Order, once a Month drinking plentifully of Whey, ſhe raiſed a Vomiting, whereby ſhe was wont to caſt up a great deal of thick and clammy Flegm; alſo during the time of her being with Child ſhe was let Blood five times. The time of Child-bearing being over, ſhe brought forth a Boy with great Difficulty: the Secundine came away entirely, and ſhe purged egregiouſly. On the ſecond day, as ſhe raiſed her ſelf on her Feet in her Bed, that the Cloaths might be put in order, ſhe took Cold; and thenceforward the bloody *Lochia* were wholly ſtopt, and only a little ſerous Water flowed forth. On the third day ſhe began to complain of an acute Pain in the right-ſide; the Women preſent applyed to it Bags of Camomile made warm with Bricks: nevertheleſs, the Affect was very much increaſt with a bloody Spittle. On the fourth day after Delivery a moſt acute Pain, with a moſt difficult and very painful Breathing, ſeiſed her. By the Order of a Phyſician then coming from the Neighbourhood, ſix ounces of Blood were drawn from the Baſilica, and ſhe ſuddenly found Relief, and was better for ten Hours. At Midnight a pricking Pain returned with the wonted fierceneſs: at length other Phyſicians being called to conſult, they all concluded that it was neceſſary to bleed again in the Arm of the Side affected. Blood being drawn

drawn to four ounces, the Pain remitted, and the Diſeaſed breathed better: afterward Diaphoreticks being giv'n, ſhe fell into a copious Sweat, with a quiet Sleep; but the Pulſe became more quick and weaker: alſo Contractions of the Tendons appear'd in the Wriſts. Preſently afterward ſhe talked light-headed, and within twenty four Hours after Blood was drawn the laſt time, ſhe died.

That this Lady, upon the *Lochia* being ſuppreſt, together with a Fever, fell into a Pleuriſie, the Cauſe in ſome meaſure ſeems to be the Bleeding ſo often uſed during the time of her going with Child; for by this means the Blood, accuſtomed to be breathed by the Arm, afterward fermenting, leaving the Womb, ran towards the wonted way of being let forth; where not finding a Paſſage, it fixed it ſelf in the neighbouring ſide as in the next ſeat of Extravaſation. Moreover, beſides the uſual ſtate of a Pleuriſie, no ſmall Malignity was added to this Diſeaſe; for the Blood being freed from Extravaſation, preſently began to be corrupted in its Craſis, and on the third Day of the Fever was ſo far deprav'd, that it was not able to ferment longer in the Heart, and ſo to continue Life.

Not long ſince, the Wife of a certain Smith was brought to Bed at the time that her Children were ſick of the Small Pox in the ſame Houſe, and her ſelf, as it ſeems, took the Contagion of the Diſeaſe; for, on the ſecond day after Delivery Puſhes began to break forth with a feveriſh Incaleſcence, and a Pain in the Loins; which for three days, the *Lochia* flowing moderately, riſe up as they ought to good Wheals; and tho a uterine Purgation happened copiouſly at this time, ſhe had the Small Pox very thick in her whole Body; nor were they only on the Surface of the Skin, but they likewiſe ſo filled the Cavity of the Mouth and Throat, that ſhe was ſcarce able to ſpeak or to ſwallow. On the ſixth day, after being delivered, the *Lochia* flow'd immoderately, whereby preſently the Small Pox falling, a Swooning, frequent Convulſions, and other Symptoms of an ill nature, aſſail'd the Diſeaſed, which threatned Death in a ſhort time. Being called, I preſcribed half a dram of this Powder to be taken conſtantly every three Hours in a Spoonful of the following Julep; *viz.*

Take Roots of Tormentil powdred two drams, the beſt Bole-armoniack one dram, Species of Hyacynth half a dram, make a Powder.

Take Water of Scordium compound, of Dragonwort, of Meadow ſweet, of each three ounces, Acetum Theriacale an ounce, Syrup of Corals two ounces, burnt Harts-horn half a dram, make a Julep.

Moreover, I ordered that in her Broth, and in all things ſhe drank, the Roots of Tormentil ſhould be boyled; by theſe Remedies the uterine Purgation was wholly ſtopt, and the Small Pox without any ſevere Symptom, being ripened by degrees, fell away.

This Caſe was really difficult, and was managed with a great deal of Danger; *viz.* It was dangerous either for the *Lochia* or *Small Pox*

to

to be kept in, and nevertheleſs, the full Eruption of either hindred the Motion of the other: as long as both proceeded moderately, the Buſineſs being left to the Guidance of Nature, went on indifferently well; but when the one prevailing, the Aſſiſtance of Art was required, it was neceſſary to check the *Lochia*, and to put forward the Small Pox.

CHAP. XVI.

Of Epidemick Fevers.

I Had deſign'd to have put an end here to our Diſſertation concerning Fevers, it being my Intent rather to write a Commentary than an entire Tract: but in regard certain *Epidemick Fevers* are often riſe, which obſerve no Laws, nor can be reduced to a certain Rule of Doctrine; but being wholly anomalous, vary yearly, and therefore, as often as ſome one of them ſpreads it ſelf, preſently it is called the *New Diſeaſe*: therefore I have thought it neceſſary, becauſe general Precepts are not to be given concerning theſe Fevers, to ſubjoyn particular Relations of ſome of this kind: for from the various Apparatus of Symptoms whereby they are wont to be marked, the Nature, and the whole formal Reaſon of theſe kinds of Affects, will ſomewhat appear. Since therefore of late Years, within a little Tract of Time, three Popular Diſeaſes have reigned in theſe Countries, I ſhall give here, as a Concluſion to this Work, the particular Deſcriptions of them made formerly in the Times that thoſe Fevers reigned.

A Deſcription of an Epidemick Fever Reigning in Autumn, *Anno* 1657. *made in the middle of* September.

WE, deſigning a Deſcription of a Fever violently reigning at this time, it is fit, that being led by the Example of *Hippocrates*, we firſt conſider the foregoing Conſtitution of the Year, and its Diſtemperatures, and Exceſſes of the Qualities; for the Cauſe of an Epidemick Diſeaſe, raiſed generally among People, muſt be common. We muſt note what the State of the Year was, and the Diſpoſition of our Body thence contracted, whereby many were affected together. Now to take the thing from its Origine, The foregoing Spring, and the Time thenceforward to the end of the Summer, to wit, all this half years ſpace was

mighty hot and dry: but especially after the Summer Solstice the Heats were so intense for many Weeks together, that Night and Day every one complained of the Heat of the Air, and almost of a continual Sweat wherewith they were all bedewed; and that they could not breath freely. About the end of *July*, this Fever being first sporadical, began to break forth in certain Places, that one haply, or two, in a Town, or Village, were seized with it: in most it carried the Type of an intermittent Tertian, to wit, the Fits returned every other Day; which nevertheless, without any fore-running Cold or Shivering, infested the Diseased with a most intense Heat; Vomitings and bilous Stools happen'd plentifully in most, a Swear succeeding, but difficult, and often interrupted, whereby the feverish Access seldom went off with an Apyrexia: but all the time of Intermission the Diseased continued languid and weak, with a Thirst, and a Restlessness; in some, when they began to amend, after three or four Fits, a cold and a Shivering began the Access, and the Fever became exactly an intermittent Tertian; but in most the Disease still grew worse, and presently became obstinate, and of a difficult Solution, with an ill Apparatus of Symptoms; for the Diseased being mighty hot in their Fits, and sweating with Difficulty, Errors were wont to be committed, which daily intended the Strength of the Disease: for through the Impatience of the Diseased, and the Unskilfullness of the Attendants, the Sweat, which ought to have ended the feverish Access, being interrupted, scarce one Fit was ended, but another presently succeeded, and thereby the Disease was wont to have erring and uncertain Periods, without an Intercession of an Apyrexia, and afterward it was wont to pass into a continual Fever as it were; the State whereof was sometimes very dangerous, with an ill Affect of the Brain, and *Genus Nervosum*, that not unfrequently a Lethargy or Delirium, and often Cramps and convulsive Motions were raised. In the Month of *August* this Fever began to reign far and near among the People, that in every Part and Village, many lay ill of it; tho it was far more common in the Country and little Villages, than in the Confines of Cities and Towns. It still carried the Type of an intermittent Fever, only that through the Violence of Symptoms, and the Shortness of Intermission, it seemed more tedious than ordinary, and therefore was generally call'd the *New Disease*. Moreover, it was censur'd of some Malignity, and gave Proofs certain enough of its Contagion and Mortality; in as much as it crept from House to House, and infected many of the same Family with the same corrupted Taint, and especially such as conversed familiarly with the Sick: moreover, in many Places it carried off old Persons, and such as were come to a Ripeness in Years.

If you consider the Nature and Essence of the Affect, this Fever must be placed properly in the number of Intermittents: for the Fits

return at ſet times; alſo for the moſt part they begin with a Cold and a Shivering, and very often with a Vomiting, and preſently going on with a moſt intenſe Heat, at length they are ended in a Sweat. The Urine in moſt appears of a Flame Colour; clear in the Fit, with ſome Hypoſtaſis, out of it thick, with ſomewhat a ruddy Sediment: the Diſeaſe comes not to a Criſis by a Sweat, tho very plentiful, and often repeated, which might be expected in a continual Fever: but the Affect holds on for many Days, and ſometimes Months, to a very long time, tho there happens a very great Evacuation by Vomiting, and Sweating almoſt daily; which we obſerve to fall out often in an Intermittent Fever, ſeldom in a continual: out of the Fit, at any time of the Diſeaſe, Purging is conveniently ordered, which it were a Crime to attempt in a Synochus before the Signs of Concoction. Moreover, that this Fever is of the kind of Intermittents, it hence appears, becauſe moſt recover of it, that ſcarce the thouſandth part of the Diſeaſed dies; which I think is ſcarce heard of an Epidemick Synochus. About the firſt beginnings of this Diſeaſe, it appears very like an Intermittent Tertian, tho it may ſeem in ſome, by reaſon of a vicious Prediſpoſition of the Body, and of Errors committed in Diet, and Tranſpiration, to have paſs'd into a continual: for in thoſe in whom the Fits do not come to a due Determination, nor end in an Apyrexia, by reaſon of the morbifick Matter being not perfectly blown off, in thoſe the Blood continually boyls; whence it comes to paſs, that the Acceſſes return quicker, and infeſt longer; till at length, by reaſon of the ſtore of the Matter, and the languiſhing of Nature, the Blood becoming weak, is not able to grow turgid any longer, and to ſeparate the Febrile Matter at ſet Hours, but endeavours to ſubdue it by little and little, and by a continual Effervescence.

Some haply may wholly place the Cauſe of this ſo Popular a Diſeaſe in a malignant Conſtituion of the Air, to wit, that the Particles of the Air breath'd in were infected with a certain extraneous Miaſm, the Corpuſcles of which Miaſm being inwardly admitted, fermented with the Blood and Humours, and ſo cauſed this Fever in a great many with the ſame Appearance of Symptoms. But I do not think that this Fever aroſe from a certain Contagion communicated from the Air, and immediately fixing the Taint in Men, but rather from a certain febrile Diatheſis or Prediſpoſition communicated to our Bodies by degrees before, through the Diſtemperature of the Year; which at length having gotten a Maturity, is brought into Act on a light occaſion; and it cannot be ſaid ſo much to burſt forth into this Fever, as to grow into it.

For when about the Beginning of *July* the Air wax'd immoderately hot, through a moſt intenſe Scorching for many days, it eaſily altered our Blood, towards a hot and bilous Diſtemperature; to wit, becauſe (as in Wine fermenting more than it ought) the ſweet and ſpirituous

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Part is very much ſpent, mean while the ſaline and ſulphureous is too much exalted, that thereby the Liquor readily contracts a Muſtineſs or a Sharpneſs: now we have ſeen elſewhere, that this kind of Diatheſis of the Blood, whereby from a ſweet and ſpirituous Temperament, by reaſon of its too great Scorching, it inclines to a bilous, is very apt for Intermittent Fevers. Hence the nutritive Juice, which is continually conveyed into the Maſs of Blood, is not duely concocted, nor aſſimilated into Blood, but is perverted into an extraneous, as it were, and fermentative Matter; which ariſing to a Fullneſs within the Blood, and growing turgid at ſet Periods, according to its Increaſes, brings the Fits of an Intermittent Fever. Since therefore from the ſcorching Heat of this Summer, the Blood almoſt of all Men growing hotter than it ought, was very much parch'd, it's no Wonder if thereby it contracted a very great Aptneſs to Intermittent Fevers: but why this Diſeaſe grew not riſe during the great Heat, but rather afterward, the Reaſon is, becauſe this Indiſpoſition is not imprinted in our Blood at one bout, but by degrees, and not till after a long time; and therefore the Fruit, as it were, of the Diſeaſe after the foregoing Heat of the Summer, were chiefly brought to a Ripeneſs in *Autumn*. All do not equally contract this Aptneſs or Diſpoſition to a Fever; thoſe whoſe Blood being hot by Nature moſt abound with Sulphur, and thereby is ſooner parch'd, and thoſe who being given to Labours or ſtaying much in the Sun, endur'd moſt of the Summer Heat, by reaſon of their Blood being more egregiouſly ſcorch'd, eaſily fell into this Diſeaſe: wherefore it firſt reigned among the Husbandmen, and chiefly in the Country: of thoſe who had acquired an Aptneſs to this Fever from their Blood being ſcorched, haply ſome fell into it naturally, the feveriſh Diatheſis being raiſed by degrees to a Maturity, others by reaſon of a light Occaſion, or an evident Cauſe, which is otherwiſe wont to raiſe a feveriſh Effervescence, as upon taking Cold, Surfeiting, drinking Wine, and the like; and others fell ſick by reaſon of a Contagion received from others; for Effluvia conſtantly flow from the Sick, which when they light on Bodies prediſpoſed to the like Affect, readily raiſe into Act the latent Powers.

That the Conjunct Cauſe of this Diſeaſe, and its formal Reaſon may be known, you muſt call to Mind what is ſaid elſewhere concerning the Nature of Intermittent Fevers; to wit, we ſuppoſe that the Baſis, as it were, of this Affect, is a burnt and bilous Conſtitution of the Blood; by reaſon of which, the nutritive Juice, daily ſupply'd as it were by Meaſure, is not duely concocted, but through its being ſcorch'd turns into a fermentative Matter, and not miſcible with the Blood. When the Blood is ſaturated with this Matter to a Fullneſs, (which happens at ſet Intervals of Times, becauſe the nutritive Juice is ſupply'd in a ſet Meaſure as it were) it naturally falls into a Turgeſcency, and the Effervescency raiſed for the Expulſion of this Mat-

ter brings the feverish Fit; which lasts so long, till this febrile Matter, kindled in the Heart, and as it were burnt, is wholly blown off with the Sweat.

From these things premitted, it is plain, that there are some things which in this Affect, whereof we treat, happen after a peculiar manner from the common kind of Intermittents, and therefore it is not unfitly call'd by the Name of a new Fever; such as are, first, that about the beginnings of the Disease, the Fits begin without a Cold or a Shivering, but long afflict the Diseas'd with a Vomiting, a Thirst, and a most intense Heat, to which a Swear for the most part with difficulty, and partial, and often interrupted, ensues, whereby the Access is not ended but in a long time: the reason of which ought to be solely plac'd in the very bilous and excessively parched Disposition of the Blood; for, this proceeding from the prevailing Sulphur, wholly hinders the wonted Sourness of the Blood, which follows its Turgescency, and is wont to raise the Shivering or Cold; and by reason of this kind of Temperature of the Blood, scorching too much and as it were burning the nutri ive Juice, the Blood growing turgid together with that Juice, and stirr'd to motion, is kindled more than usually in the Heart, and by its Deflagration, it causes a most intense Heat with a Drought, which are most tedious to the Diseas'd. Bilous Vomitings happen not only at the Beginning, but even in the middle of the Fit, by reason of the Redundancy of the Choler wherewith the *Vasa Coledocha*, being oftentimes too much fill'd, they pour it into the Intestines; which afterward, a Contraction being raised in the Viscera, is easily sent into the Stomach: the Sweat follows with difficulty, because the Choler abounds more than the Serum; wherefore the burnt Febrile Matter is not easily separated by a Sweat, but, either being mixt with the Blood, brings a long continued Effervescence, or being convey'd towards the Intestines, produces a Vomiting or a Looseness. Secondly, this Fever differs from a vulgar Intermittent, because, after a Fit ended, there is not given a full Intermission, so far as an Apyrexia, but the Diseas'd continue still languid and dry, being ill disposed as to their Appetite, Sleep, and other Accidents: which really happens, because by the intense Heat of the Fever, more of the Blood and febrile Matter is kindled, than that the Recrements remaining after its Deflagration can be soon blown off, especially because a Sweat, by reason of the Drought of the Matter, with great difficulty ensues; nor is the febrile Matter, to be voided forth, sufficiently diluted with a Serous Latex: wherefore, the Blood being not perfectly freed from its Contagion at the time of the Fit, ferments still, nor the Access being ended, has it a full Truce from the Disease. Mean while that the Blood is press'd after this manner with an almost continual Effervescence, it differs from a Synochus: because in this the sulphureous Part of the Blood being too much exalted, is inflam'd as it were, and

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makes the Fever by its Deflagration: but the continual Ebullition which happens to this Intermittent Fever, depends wholly on the Confuſion of the Matter not miſcible, and the difficult Secretion of it from the Blood. A Synochus happens as Wine naturally fermenting by reaſon of its Richneſs; the other like the ſame Wine when it falls a working by reaſon of ſome hæterogeneous thing mixt with it: wherefore we obſerve, that when our Fever has paſs'd into a continual, yet it comes not to a Determination, neither by a Sweat, nor by a Looſneſs, tho happening in a plentiful manner and frequently, becauſe depending on the Blood depauperated, rather than being inflam'd, it continues a very long time, and diſpoſes the Diſeaſed towards a Cachexia.

The third way of difference, wherein this Fever differs from the common Rank of Intermittents, is plac'd in this, that it is oftentimes readily propagated by Contagion into others; the reaſon of which is, becauſe here a great many Bodies are prediſpos'd after the ſame manner to the ſame Affect; which at another time does not happen: wherefore the mere Effluvia from a morbid Body are able to ſtir up the like Affect in a Subject eaſily capable; even as certain Rays of a Flame kindle a Flame in a Matter which is very combuſtible: mean while, all do not contract the taint of this Fever alike; but ſome not prepar'd for it converſe with the Diſeas'd without hurt.

There is another Symptom which does not conſtantly attend this Fever, but only happening in ſome Places, which diſtinguiſhes it not only from a common Fever, but changes its own proper Type, to wit, it ſometimes happens that dyſſenterick Affects accompany this Diſeaſe; in ſome bilous Vomitings and Seiges are very troubleſome, as in the cholerick Diſeaſe, and in others bloody Stools happen with a violent Pain and Gripes of the Belly. I have often obſerv'd the former in this our Neighbourhood; and the reaſon of it may be deduced from a mighty bilous Temperature; for by reaſon of this, the aduſt Matter, not to be blown off by Sweat, is copiouſly ſeparated in the Liver: afterward by reaſon of the *Vaſa Choledocha* being over-fill'd, it is ſent to the Ventricle and Inteſtines: the other Affect of the Dyſentery is found only in ſome Places, and there being ſporadical rather than common, it has ſeiſed only ſome ſick Perſons. The Origine of it can be aſcrib'd only to the peculiar Craſis or vicious Prediſpoſitions of ſome Bodies, alſo to the Scituations of Places, or the nature of the Air. Moreover, it may be ſuſpected that the Diſeaſe is now and then conveyed to others, not without the Communication of a certain Miaſm.

Concerning this Diſeaſe, there ought to be a double Prognoſtick; firſt of the Fever it ſelf, in general, what kind of end it will have, and when; what it does threaten to our Land; whether it be not a Fore-runner of the Plague, or Peſtilential Diſeaſes, (as it is vulgarly feared.) Secondly, We ought to give the Signs by which we are wont to

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preſage a Well-doing or Danger in the various Caſes of the Diſeaſed.

As to the firſt, becauſe we have ſhewn that the Origine of this Affect is not to be taken from the Air infected with a Contagion, or venemous Miaſm, nor from a malignant Seminium of Vapours diffus'd through the Air; but only from a mighty bilous Temperature or Diatheſis of our Bodies, with a Blood which is aduſt and mightily ſcorch'd by reaſon of the Summer Heats: I think there is no cauſe of Fear here, whereby we may dread that this Fever, being rais'd to a worſe ſtate through the fault of the Air, may grow at length to be Malignant or Peſtilential; but rather (what the Change of the Seaſon of the Year, and the Alteration of our Blood may make us expect) we ought to fear leſt this Fever, which at firſt imitates the Type of a Tertian, may paſs into a Quartan: which I obſerve has already happened to ſome; and think it is greatly to be fear'd, leſt hereafter, *Autumn* drawing to an end, it may happen in many.

As to the particular Prognoſtick, the Signs which happen in the courſe of this Fever moſt remarkable, and which in ſome manner foretell its Iſſue and Event, are theſe: If the Diſeaſe happens in a ſound Body, well-temper'd, and eaſily perſpirable, if a Vomiting with a well-bearing enſues, and the Belly be looſe; if the Fit begins with a light Shivering, and after a moderate Heat ends in a Sweat, and the Interval of it be with an Apyrexia, or a well-bearing; if the Pulſe be ſtrong, the Urine of a flame colour, clear, with a laudable Hypoſtaſis, we predict that the Diſeaſe will end in a ſhort time without danger: but if this Fever be raiſed in a fat Body, and of a vicious Habit; if with a troubleſome Vomiting, an exorbitant Heat, and an intolerable Thirſt, long torment the Diſeaſed; if the Heat be ſucceeded by a difficult, partial, often interrupted Sweat, and interlac'd with frequent Vomitings, and does not end in an Apyrexia, we declare this Diſeaſe to be long, and liable to Danger: but if the Diſeaſed holds his Strength, and the Urine ſhews ſigns of Concoction, we do not deſpair of well-doing; eſpecially if after four or five Returns, the Diſeaſe, as it is uſual, remits of its wonted fierceneſs. Thirdly, we obſerve, if this Diſeaſe happens in a Body which is cold, or broken with other Diſeaſes, or weaken'd; if beſides horrible Vomitings, and a violent Heat, a frequent Fainting, Swoonings, Deliriums, or Lethargick Affects happen; if after many Acceſſes, the Strength of the Diſeas'd falling, the Diſeaſe remits nothing, but a continual Effervescence troubles the Blood, and very much diſſipates the vital Spirits; if a dejected Appetite, obſtinate Watchings, convulſive Motions, with a weak Pulſe, a troubled or thick Urine happen, we declare the Caſe to be full of Danger: but it is protracted to a good length, and it gives Time and Occaſions for Nature to recollect her ſelf, and to the Phyſician for giving Remedies.

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The *Therapeutick Indications* which have place in the Cure of this Fever, are chiefly four. First, that the Blood being becom burnt, and too bilous, be reduc'd to its due temper. Secondly, that the depravation of the Nutritive Juyce, and its alteration into a fermentative matter, be ſtopt, or at leaſtwiſe, be leſſen'd. Thirdly, that about the declination of the Diſeaſe the Blood being depauperated by a frequent Deflagration, and rendred impure by the mixture of the morbifick or aduſt matter be reſtored, and be rendred volatile as it ought. Fourthly, that we obviate with Remedies the Symptoms which are chiefly infeſting in the Courſe of the Diſeaſe. To anſwer theſe Intentions, I adviſe the following Method to be uſed.

About the firſt beginnings of the Diſeaſe, if a bilous Humour flowing from the *Vaſa Choledocha*, and ſent into the Ventricle, the Diſeaſed be inclin'd to Vomit, when the Fit is at hand let a plentiful Evacuation of the ſame be raiſed by a gentle Emetick: Blooding and Purging ought not to be uſed but during the Interval of Fits; for while the Blood violently ferments, or is reſolved into a Sweat, Nature ought not to be diverted from its Works begun, nor its Attempts be diſturbed by the Preſcripts of Phyſicians; wherefore after the Acceſs is over, and the Sweat entirely ended, let a Purging be ordered by a gentle Cathartick, and let the ſame afterward be ſometimes repeated on the like occaſion: for by this Method, not only the ſtore of the excrementitious Matter is withdrawn from the firſt Paſſages, but eſpecially the Choler-Veſſels being emptied, the Bile is plentifully drawn from the Maſs of Blood, and thereby the Blood is reſtor'd toward its natural Craſis. Let Blooding, if it be indicated, be put in Practiſe, from the beginning; for ſo its Liquor growing too turgid, is eventilated, whereby it both leſs perverts the nutritive Juice, and when the Fit preſſes, it burns with a more mild Blaſt together with the morbifick Matter: but otherwiſe, if after a long Sickneſs a Vein be opened, when the Blood being depauperated and rendred watery, has heaped together more of morbifick Matter, and does not duely concoct it, and purge it forth, much is drawn from the Strength of Nature, from the Power of the Diſeaſe nothing. In the Interval of the Acceſſes, when Blooding nor Purging may not be admitted, let the Belly be kept ſoluble by a conſtant uſe of Clyſters; alſo let digeſtive Remedies of acetous or ſaline Liquors and Powders be giv'n, ſuch as Cream of Tartar, the fixt Salts of Herbs, Tartar Vitriolate, burnt Harts-horn, Spirit of Vitriol and of Salt, *&c.* for theſe reſtore the Ferments of the Viſcera loſt or grown ſluggiſh, depurate the Blood by fuſing it; alſo ſeparate, and as it were, precipitate the morbifick Matter: alſo at this time, if obſtinate Watchings chance to prove infeſting, and impair the Strength of the Diſeaſed, we may interlace Anodyne and gently Narcotick Remedies, but by no means give them in the Acceſs, for then they greatly hinder the ſubduing, and ſecretion of the febrile Matter, and prolong the Fit which would ſooner end.

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So far concerning what is to be done in the Intervals of the Fits; but in the Fit, tho the Diſeaſed then chiefly ſend for and call upon Phyſicians, yet their Preſcripts at this time are limited within a narrow Scope: if a Vomiting (tho an Emetick be giv'n before) be ſtill infeſting, let it be freely promoted by Poſſet-Drink, either ſimple, or with bitter Herbs boyled in it; but let the chief way of the Cure be in qualifying the Heat and Drought, which are wont to torture ſeverely the Diſeaſed in this Fever; for whilſt the Blood, fermenting with the morbifick Matter, and being kindled in the Heart, ſprings into the Lungs, it raiſes there a moſt violent Inflammation, which requires a pouring on of cold Water as it were for extinguiſhing a Flame: wherefore they deſire to be pouring in Drink without meaſure; without which the Diſeaſed faint through the too much burning, and in a manner all their Blood, being rarefied as it were into a Flame and a Smoak, does not eaſily continue the thread of Circulation; wherefore, Drink by all means ought to be granted to thoſe that are in the Fever: which nevertheleſs, if it be pour'd in in too great a quantity, firſt it exagitates more the boyling Blood, and again brings a Confuſion of the febrile Matter began to be ſeparated, that thereby the Work of ſubduing and Secretion is longer protracted, and the Fit is made longer; moreover, a great pouring in of Drink proves offenſive to the Stomach, and by troubling it, and often by raiſing a Vomit, hinders Tranſpiration, and calls in a Sweat breaking forth, or haply already broken forth: wherefore, when the Heat of the Fever is firſt kindled, let the Diſeaſed, tho very dry, drink only by ſipping, and, what they may, let them refrain it; afterward when the burnt and ſubdued Matter begins to be ſent off by Sweat, let them more freely gratifie themſelves with it; for ſo the Sweating is greatly promoted, and the Fit is ſooner over: as to the nature of the Drink, ſometimes let Poſſet Drink, ſometimes ſmall Ale, or Barley Water be given; ſometimes Fountain Water, either alone, or ſharpen'd a little with the Juice of Limons: in this caſe, the uſe of Sal Prunella is juſtly commended, given in any Liquor; for this, by its Nitroſity, wonderfully reſtrains the boyling Blood, and powerfully moves Sweat. I have often obſerv'd in the middle of the Fit, that the Diſeas'd have fall'n into a Fainting or a Swoon, where the Cordials and hot Liquors, which are wont preſently to be pour'd in, very much increaſe the Violence of the Fever, and cauſe greater Troubles than uſual, that the Fit is more difficultly ended: but theſe Swoonings, for the moſt part, happen either from the bilous Humour ſent into the Ventricle, or by reaſon of a Sweat broken off abruptly, and againſt theſe I have always found the moſt preſent Remedy; that either a Feather being put in the Throat, a Vomit be promoted, or that a thin Liquor being drank in a plentiful Meaſure, the Sweat be again rais'd: and in the whole Courſe of this Fever, I am wont to give no Cordials or Alexipharmicks.

A Diet

A Diet in this Fever only thin, and not rich, ought to be ordered: let all Food prepar'd of the Fleſh of Animals be wholly ſhunn'd; for theſe abounding with Sulphur, plentifully afford a Fuel to the boyling or kindled Blood, as Oyl pour'd on a Flame: moreover, let nothing ſpirituous, as hot Waters, ſtrong Ale, or Wine, be allowed; but let Oat or Barley Decoctions or Broths, altered with cooling Herbs, be chiefly uſed; alſo let Poſſet Drink, ſmall Ale, or Whey, be drank by the Diſeaſed at Pleaſure: for ſince by this Means a very thin and watery nutritive Juyce is conveyed to the Maſs of Blood, the reſolved Particles of the Sulphur are burnt off ſooner, and with leſs Tumult; alſo the Recrements of the aduſt Matter are more readily ſent forth from the Maſs of Blood: but if on the contrary, a rich and plentiful Nouriſhment be uſed, the Effervеſcence of the Blood is thereby much encreas'd, and the Blood is more infected with the Mixture of an aduſt Matter.

When after frequent Fits, the Blood being much burnt off, and the Fever, being in its declining State, has remitted of its Fervour and Fierceneſs, Care muſt be taken, that the Diſeaſed, while upon their Recovery, do not fall into a Cachexia, or Scorbutick Affect; for the Craſis of the Viſcera being injured, and the Blood being very much depauperated, the nutritive Juice, tho it be not ſcorch'd as before, yet is not duely concocted, and maturated into a perfect Blood: but through defect of a Pneumatoſis, ſerous Excrements, imbued with a fixt Salt, are very much heap'd together; and ſometimes being fixt in the Viſcera, ſometimes in the extream Parts, bring forth various Affects. Wherefore in a long continued languor of the Diſeaſed, or otherwiſe, in order to a quicker Recovery, let Remedies be given which volatize the Blood, and either hinder the Stuffings of the Viſcera, or remove them being made, and reſtore their Ferments being almoſt extinct; for this Uſe chiefly conduce the Remedies and Preparations, which are vulgarly call'd Digeſtives and Antiſcorbuticks; by which being ſeaſonably adminiſtred, I have known many weak, pale, and bloodleſs Perſons as it were, to have ſoon recover'd a ſprightly Strength and Vigour.

A Deſcription, made the laſt Day of May, *of a Catarrhous Epidemick Fever happening in the middle of the Spring,* An. 1658.

AN immoderate Heat of the Summer before was followed in the Winter with a Froſt equally intenſe, ſo that no Man living has ſcarce remembred a year like this for an Exceſs both of Heat and Cold. From the fifth of *December* almoſt to the Vernal Equinox, the Earth

was cover'd with Snow; and from the North Winds continually blowing, all things, ſet in the open Air, waxed ſtiff with Cold: and afterward, from the beginning of the Spring almoſt to the firſt day of *June*, the ſame Wind ſtill blowing, the Seaſon was more like Winter than Spring, only that ſometimes haply it was interlac'd with a day or two of hot Weather. During the Winter, amongſt our People here (ſave that the *Quartan* Ague contracted in the *Autumn* infeſted ſome) the State was indifferently healthful, free from any popular Diſeaſe. In the beginning of the Spring an intermittent *Tertian* Fever (as it's uſual in every other year) ſeiſed ſome. About the end of *April*, on a ſudden an Affect ſhew'd it ſelf, which being ſent as it were by a certain Blaſt from the Stars, ſeis'd a great many; that in ſome certain Towns, in a Weeks ſpace, above a thouſand Men lay ill at once. The Pathognomick Symptom of this Diſeaſe, which firſt ſeiſed the Diſeaſed, was a troubleſome Cough, with a copious Spitting, and a Catarrh falling on the Palate, Throat, and Noſtrils; there is alſo a feveriſh Diſtemperature, which for the moſt part is joyn'd with a Heat and a Drought, a want of Appetite, a ſpontaneous Laſſitude, and a great Pain in the Back and Loins: which Fever nevertheleſs in ſome was more remiſs, that they walk'd abroad, and during all the time of their Sickneſs followed the uſual Offices of Life, complaining in the mean time of a want of Strength and a Weakneſs, of a loathing of food, of a Cough and a Catarrh. Now in ſome a hot Diſtemperature very much reigned, that being confined to their Bed, they were troubled with a Burning and a mighty Drought, with Watchings, a Hoarſeneſs, and an almoſt continual Cough; ſometimes a Bleeding at Noſe, in ſome a Spitting Blood, and often bloody Stools, happened upon this Affect. Thoſe who being of an infirm Body, and ſtricken in Years, were ſeiſed with this Diſeaſe, many of them died; but in a manner all of thoſe that were ſtrong and of a ſound Conſtitution recover'd: thoſe who yielding to this Diſeaſe periſhed, they died for the moſt part by reaſon of their Strength being waſted by Degrees, and a Maſs of ſerous Filth being heaped together in the Breaſt, with the Fevers being increaſed, and a difficult Breathing, like Perſons troubled with a Hectick Fever. Concerning this Diſeaſe, we muſt enquire what kind of Procatarctick Cauſe it had, that it ſhould riſe on a ſudden in the Spring, and that within a Months time almoſt the third Part of Mankind ſhould be affected with it. Afterward, the Signs and Symptoms being diligently compared together, the formal Reaſon of this Diſeaſe, alſo the ways of its Criſis and Cure, ought to be aſſigned.

That the North Wind is moſt apt for producing Catarrhs, beſides the Teſtimony of *Hiſtorians*, common Experience makes good: but why Catarrhs did not ſpread themſelves ſo much ſporadically during all the Tract of the Winter and Spring, but that this Affect ſhould reign epidemically only for the ſpace of one Month, and then joyn'd with

with a Fever, the reaſon is not ſo plain. I know that many draw the Cauſe from the uneven Diſtemperature of the Air, for that Seaſon; which tho for the moſt part cold, yet ſometimes, the Northwind remitting, for a Day or two was very hot; wherefore, on this Occaſion, as upon taking Cold after being hot, many Men might fall ſick: this kind of evident Cauſe might ſuffice haply for affecting ſome with this Sickneſs; but for cauſing an Affect ariſing ſo on a ſudden, and generally reigning, beſides ſuch an occaſion, a great Procatarxis or Prediſpoſition was requir'd: for it ought to be ſuppoſed, that all Men in a manner, were ready prepared for receiving this Diſeaſe, otherwiſe no evident Cauſe would exerciſe its force ſo powerfully on a great many: wherefore it is likely that this Diſeaſe drew its Origine from the Diſtemperature, and very great Irregularity of the Year: and as the intermittent Autumnal Fever above deſcribed was the Product of a preceeding immoderate Heat, ſo this catarrhal Fever wholly depended on the Tract of the Year hapning to be too cold; for the Blood being already burnt from the over-hot Summer, and inclin'd to the Fever above deſcribed, then *Autumn* coming on being made more ſharp, and apt to a *Quartan* Fever, afterward by reaſon of the intenſe Cold of the Winter being little eventilated, and hindred from its due Perſpiration, it held ſtill a Dyſcraſie, and was ready to ſuffer by it as occaſion might be given. Wherefore, in regard the Blood in the middle of the Spring (as the Juyce of Vegetables) being become more ſprightly, and having begun to ſpring and diſplay it ſelf, by reaſon of its Thickneſs ſtill continued, was ſtraitned in circulating, it was prone to feveriſh Effervescencies; and in regard the Serous Latex abounding in the Blood, was not able to evaporate forth by reaſon of the Pores being ſtill cloſed with the Cold, reſtagnating inwardly and falling chiefly on the Lungs (where ſomewhat ſuccedaneous is performed to outward Perſpiration) it rais'd ſo frequent and troubleſome a Cough.

Therefore the Riſe and formal Reaſon of this Diſeaſe are chiefly founded in two things; to wit, that there happened together a greater Effervescence of the Blood than ordinary, cauſed by the Spring Seaſon, and withall a Denſity, or a great Conſtriction of the Pores cauſed by the preceeding Tract of Time which was too cold; that thereby there was not a free ſpace granted the Blood ſpringing in the Veſſels: the Caſe was the ſame, as if Wine beginning to ferment, were put into Veſſels cloſe ſtopt; for by this means both the Veſſels and the Wine are in danger of being deſtroyed.

Wherefore, to draw the thing in ſhort; that this Diſeaſe ariſing in the middle of the Spring, preſently ſpreading very far, ſeiz'd a great many, the cauſe was not a blaſt of a malignant Air, whereby the Diſeaſed were affected as tho ſtruck by a Sideration, as ſome will have it, but that at this time the Blood being inſpired by the Conſtitution of the Spring, and ſo apt to diſplay it ſelf and ferment, was ſtrait-

ned in its Motion, and the Effluvia being outwardly restrained, it could not be enough ventilated. Every year, tho temperate, it is usual in the Spring and Fall for certain Diseases to reign epidemically, to wit, because at this time, the blood being renewed, displays it self as it were anew, and therefore intermittent Fevers, and sometimes the Small Pox grow every where rife at this time; wherefore it is no wonder, after a very uneven Constitution of the Year, and differing from the natural, when in this Spring the Blood boiling strongly within the Vessels, by reason of a letted Transpiration, was not able to be circulated freely, and to be enough eventilated, if thence great Disorders follow, and a very epidemick Affect be raised from this very general Cause.

As to the Symptoms joyned to this Disease, the feverish distemperature and the things depending of it, the burning of the Præcordia, the Thirst, spontaneous Lassitude, the great pain in the Head, Loyns or Limbs, were caused by the Bloods boiling too much, and not being enough eventilated. Hence in many the thinner part of the Blood being heated, and the remaining Liquour being only troubled, a Synochus simple, or of many dayes was caused: but in some having a vitious Diathesis of the Blood, or an ill habit of the Body, this kind of Fever being arisen through the same cause, soon palled into a very dangerous, and often mortal putrid.

The Cough accompanying this Fever with the Catarrh, draws its origine from the serous Humour heapt together along time in the Blood, by reason of Transpiration being letted, and afterward an effervescence arrising, distilling in a great plenty from the little Arteries gaping inwardly: for when the Pores are constringed, the superfluous Serosities in the Blood, wont to evaporate outwardly, are poured on the Lungs by a nearer way of purifying the Blood: Wherefore upon taking cold, (as its vulgarly said) that is upon Transpiration being outwardly letted, a Cough for the most part is raised: and in the Procatarxis for this affect, a redundancy of Serum in the Mass of Blood had almost the first Place, for from the long continued cold stopping the burning of the Blood, or the encrease of Cholor, and hindring the Transpiration of the watery Latex, of necessity a great deal of serous Humour was heapt together in the Blood; wherefore, when the Blood, displaying it self in the Spring, fell into an Effervescence, the overflowing of the Serum, and its discharge on the inward Parts was wont to bring first a Cough, as a proper Symptom of this Disease: and in whom the Blood, being much diluted by the mixture of Serum, were very obnoxious to the Cough and rheumatick affect, those came more lightly off with the Feverish Distemper.

The Prognostick of this affect, as to private Persons, for the most part is easy, that presently from its first invasion it discovers the event. For if this Sickness be raised in a robust Body and sound before, and the

the feverish Distemperature be moderate, and without any severe and dreadful Symptom, the Case is free from Danger, and the affect is reputed of so light Moment, that commonly it is only called a Cold taken, and for the most part neither a Physician nor Remedies are sought after, unless some that are very common, and of an easy Preparation are used. But if this Affect happens in a weak and unhealthy Body, with an ill Apparatus, and either the Fever be raised to a putrid, or the Cough growing strong, causes a difficult Breathing, and a kind of consumptive Constitution, the event of the Disease is very much suspected, and often is terminated in Death. The common Prognostick, which is taken hence concerning the future state of the Year, contains nothing very much to be feared, or threatens mighty ill; by reason of the uneven Intemperies of the Year, as great excesses of Heat, and afterward the Cold, we may fear Diseases arising from the diserasy of the Blood; but from the present state, we neither suspect the Air mightily depraved, nor infected with venemous Breaths, that we may hence ground a Judgment of a Plague, or malignant intermittent Disease.

As to the Method of Cure, when this Disease seises lightly, its cure for the most part is left to Nature: for this Fever being only a simple Synochus, is wont to be determined within a few dayes by a Sweat. Wherefore after a copious Sweat for the most part about the third or fourth day, the heat and Drought, the lassitude and great Pains are appeased: then the Cough, protracted longer, afterward remits by little and little, and at length the Diseased recover by degrees. If at any time this Disease has taken deeper root, there is need of fit Remedies and an exact Method of Cure; let the Fever growing strong be cured according to the Rules to be observed in a putrid, tho with this difference, that because a letted Transpiration, and the discharge of the serous Humour on the Lungs are chiefly in the fault, therefore let Diaphoreticks, and the Remedies called Thoraciks be of frequent use; for these restrain the great flowing of the Serum from the Vessels inward, and either by opening the Pores, convey it outward, or by precipitating it from the Mass of Blood, send it away by the urinary Passages: therefore let the Method of cure for this Disease raised to a worse state, regard both the *feverish Distemperature*, for curing which you may direct according to the Intentions used in a putrid Fever: and the *Rheumatick Affect*, Which nevertheless must be the second Indicant, and does not admit any evaporating Remedies indifferently, or such as are usual against a Cough, but only of that kind, which does not intend the Fever. Let the Forms of these and the fit times of healing, be taken from the Precepts every where delivered for the cure of the putrid Fever, and of the Cough: the Aides which now by a frequent Experience are vulgarly said to have given a chief relief in this Disease, are a Diaphoresis, or a procuring of a Sweat, and a letting Blood;

Blood; for the Veſſels being emptied this or that way, both the immoderate Effervescence of the Blood, and the redundancy of it are moderated.

A Deſcription, made the firſt day of September, *of an Epidemick Fever, ariſing about the beginning of Autumn,* An. 1658.

THE Vernal Fever even now deſcribed, ſcarce laſted above ſix Weeks, that it plainly ſeemed only a light Effervescence of the Blood, which growing turgid in the Spring, and withall being ſtraitned in its room for want of Ventilation, boiled violently like new Wine ſtopt in Bottles, and afterward ceaſed of its own accord: but thenceforward, as the Year did not recover its due Temper, ſo neither did our Blood, and ſo a ſecond fewel was ſoon heaped together for a new Fever, for after the Summer Solſtice, the North-wind ſtill blowing, the Seaſon continued cold a long time; ſo that the Husbandman feared that the Fruits and ſtanding Corn would ſcarce be brought to a Maturity this Year: but after this, a little before the beginning of *Auguſt*, a moſt intenſe heat followed for many dayes; and in the Dog Dayes the Air was mighty parching, that it was very tedious to be in the open Field. By reaſon of thoſe Exceſſes of Heat and Cold, the Temperature of this Year was very uneven: wherefore of Neceſſity our Blood muſt be ſometimes fixed, and as it were congealed, ſometimes too much parcht, and therefore preverted from its natural Craſis, to be burnt, or atrabilarious: alſo the Pores of the Skin were very much altered from their due Conſtitution, that thereby inſenſible Tranſpiration was not performed after its wonted manner.

From the time the foregoing Fever ceaſed there was a healthy ſtate, and free from any popular Diſeaſe, almoſt to the end of the Dog-dayes: but afterward, a few, firſt in Country Houſes and Villages fell ſick here and there: but afterward about the end of the Month of *Auguſt*, a new *Fever* riſing on a ſudden, began to be riſe throughout whole Countries, on every ſide in our Neighbourhood; this, alſo the other, which reigned the Autumn before, chiefly raged in Country Villages, and Boroughs; fewer of the Inhabitants of Cities, and the greater Towns in the mean while falling ill of it. At the ſame time in other Countries far remote from hence, nay almoſt throughout all *England*, an Epidemick Fever was ſaid to reign, and in certain other Places a far greater mortality was talked of, than here with us. Haply the Idea of this Fever now reigning, and its Apparatus of Symptoms is not in all Places alike in all things, or is it markt wholly with the ſame Phænomena and Accidents, I ſhall ſet down ſuccinctly, and

and briefly, whatſoever I have learned by my own Obſervation, or by the Communication of others, concerning its Nature as it was in our Neighbourhood.

About the firſt beginnings of this Diſeaſe, its Type was erring and very uncertain; for in ſome there was a continual Effervescence, in others it was intermittent, and renewed with ſet Fits; but in a great many of the Diſeaſed it happen'd as a pathognomick Symptom at this time to be ill in the Brain and *Genus Nervoſum*, that preſently from the beginnings of this Fever almoſt all complain'd of their Head being very bad, for ſome were infeſted with a violent Head-ach, others with a hardneſs of Hearing, and a ringing in the Ears; but to moſt, either a Drowſineſs, and a great Sleepineſs, with a vertiginous Affect, or obſtinate Watchings, with a Delirium, and Diſtractions of the Animal Spirits, were wont to happen. I have obſerved in ſome, that on the firſt or ſecond Days of being ſick, broad and red Spots, like the Meaſles, broke forth by little and little in the whole Body, which vaniſhing in a ſhort time after, preſently the Fever became more intenſe, and eſpecially the Affects of the Head far more ſevere: thenceforward a Drowſineſs of the Senſes, and a Sleepineſs ſeiſed ſome for many days, that they lay a long time without Speech, or Knowledge of their Friends, like Perſons ready to dye. I have known ſome to have been caſt hence into a Lethargy, others into an Apoplexy, ſome to have fall'n into Deliriums and a Frenzy. Many of the younger and ſtronger of theſe Men eſcaped (tho not without a long continued Weakneſs and a doubtful Recovery) mean while, the old Perſons, and thoſe who were otherwiſe weak and ſickly, dyed in all Parts: as for ſuch who lay ill of a continual Fever as it were with theſe Marks of Malignity, they were but few, and only in ſome Houſes ſporadically: but the Sickneſs which, moſt generally reigning in our Neighbourhood, aſſail'd moſt, and ſtill ſeverely rages, ſeems to imitate the Type of an intermittent Fever; *viz.* of a *Tertian* or of a *Quotidian*: for either each Day, or (which I have more frequently obſerved) every other day, the Diſeaſed have Fits, which with a Cold, a Heat, and a Sweat ſucceeding in order, infeſt them a long time and ſeverely: and theſe kinds of Acceſſes, and the whole courſe of the Diſeaſe, are wont to be mark'd with a various Concourſe of Symptoms and Accidents, according to the different Age and Temperament of the Diſeaſed: and this is common to moſt (I had almoſt ſaid to all) that fall ſick to be troubled with Cephalick Affects together with this Fever.

When therefore any one is affected with this Diſeaſe (whether the Sickneſs be raiſed from an evident Cauſe or from Contagion, or without a manifeſt Occaſion) a Pain in the Head, and often in the Loins, with a Drought, a want of Appetite, a ſpontaneous Laſſitude, and a Heat, tho not intenſe, diſcover its coming: if it happens in a young Body, of a florid Blood, and hot Temperament, about its Beginnings the

the Fits are without a Cold, or a Shivering, but they prove very troubleſome with a long and ſharp Burning. The Sick are often troubled with a Vomiting, and for the moſt part they have a violent Pain in the Head; a Swear happens with difficulty, which often being partial, and ſoon interrupted, ſeldom ends the Fit; but when they ceaſe to ſweat, they burn again, that the Acceſs is ſcarce ended in ſome within eighteen or thirty four Hours. Mean while, by the Bloods very much boyling the Fancy is troubled, that often a Delirium, a talking light-headed, Watchings, and a great Reſtleſſneſs, are raiſed during the Fit; and the ſame being ended, during the time of the Interval, ſtill a troubleſome Drought, a remiſs Heat, a failing of the Strength, and a great Weakneſs of the Spirits, with a Head-ach and a verginous Affect, moleſt them: they are ſcarce to be found, who, as in a common *Tertian*, are indifferently well in the Intervals of the Acceſſes. About the Beginnings of the Diſeaſe, the ſharp Fits of the Fever are ſomewhat more mild, which afterward grow worſe every time by little and little, and at length begin with a Cold or a Shivering; to which nevertheleſs after a long and very troubleſome Burning, a Swear with difficulty ſucceeds in moſt, ſo that the Fit is ſeldom ended in a due Temperature. Within ſix or ſeven Returns, the Strength of the Diſeaſed is very much conſumed, that being become languiſhing and weak, they have a hard Task to ſtrive with the Diſeaſe; for unleſs Nature be aided by Art, the Fever, ſtill prevails; and ſeldom or never within a ſhort time is either ſolv'd by a Criſis, or remits by little and little, but brings the affected by a long Siege to the greateſt ſtraits, to wit; perſiſting ſo long, till the Blood being become very effæte, or rendred watery, by its frequent Deflagration, is altogether unmeet to boyl too much of its own accord in its Veſſels, or to be freely kindled in the Heart; and then it becomes often ſo vapid, and poor of Spirits, that being inſufficient for continuing the Lamp of Life, it brings Death. But ſometimes the maſs of Blood, depraved and depaupered by this Diſeaſe, is able to continue (tho with difficulty) the Vital fire half extinct, and to refreſh it again by little and little, and in a long time, with Spirit and Vigour, tho in the mean while after the height of this Diſeaſe, when the Blood being rendred weak, and withall impure, is not able to expell forth the febrile Matter, or the aduſt Recrements by a critical Motion, it conveys the ſame to the Brain; and therefore about the increaſe of this Fever, a Drowſineſs, and a Stupidity of the Spirits, a Sleepineſs, a Vertigo, a ringing of the Ears, Tremblings and Convulſive Motions, with a great Suppreſſion of the whole animal Faculty are oftentimes cauſed,

Thoſe, who being of a cold Temperament, or grown in Years, are ſeized with this Diſeaſe, tho they have not ſo acute a Fever, yet are wont to lye in a greater danger of Life: for in theſe, beſides the Diſpoſition

poſition of the Blood not eaſily reducible; alſo in the Fits, what is heaped together extraneous and not miſcible, is hardly ſubdued, and with difficulty ſeparated from the maſs of Bood: wherefore, both the Blood is ſtill more notably depraved in its Craſis, and in every of the Fits is more infected with an impure mixture: Moreover, the Nervous Liquour is greatly perverted from its due Temper, and is exceedingly defiled with aduſt Recrements continually poured on the Brain: when therefore old, melancholy, or otherwiſe unhealthy Perſons, fall into this Fever, from the firſt Invaſion they preſently become torpid, and for the moſt Part Vertiginous: in the Fits, tho the heat be not vehement and ſharp, yet they lye reſtleſs, and toſſing very much, often talk abſurdly and idlely: after a long Incaleſcence, either no Sweat, or only a partial one, and often interrupted, enſues, whereby the fit is not fully ſolved: but all during the Intervals, the Diſeaſed being very dry, continue to be ill diſpoſed, with a drought of the Mouth, a roughneſs of the Tongue, and an overſpreading of a viſcous Lee: after ſome fits, their Strength being mightily dejected, either they are confined to their Bed altogether, or riſing a little in the day time, they are ſcarce able to ſtand, or to creep about from Place to Place: mean while they are troubled with a Fainting, a difficult Breathing, a Deadneſs of the Senſes, and a great Weakneſs of the whole *Genus Nervoſum*. The Urine is intenſly red in a great many, of a more ſaturated Colour, and a thicker Conſiſtency than in a common *Tertian*; the Pulſe, as long as the Strength is not wholly caſt down, for the moſt part is ſtrong and even; afterward, when the Diſeaſed grow very faint, it is weak, uneven, and often intermittent, to which alſo Contractions of the Tendons, and convulſive Motions in the Wriſts, being joyn'd, for the moſt part give an occaſion for a Prognoſtick of Death. Thoſe who being weak'ned by degrees decline toward Death, for ſome time before they dye, lye for the moſt part without ſpeech, or the Knowledge of the Standers by, as Perſons ſtupid: it ſeldom happens in this Fever, that any one about to dye, being of a good Memory and Underſtanding, diſpoſes things of his Family, or bids his Friends farewell: and thoſe who happen to eſcape from a mighty Weakneſs, and almoſt from a deſperate Condition, do not recover by a ſudden and manifeſt Criſis, but wavering a long time, lye torpid and enervated, that not without a doubtful and difficult Conteſt, Nature at length, with much adoe, prevails over the Diſeaſe, and then they recover their Strength by Degrees by a ſlow and long-continued Convaleſcence.

If the nature and formal reaſon of the Epidemick Fever even now deſcribed be inquired into, we ſay that this (as that of the foregoing Year) is properly an Intermittent, for that which generally reigns, carries this kind of Type; tho ſome continual Fevers here and there are ſcattered with them; of which alſo we ſhall preſently give a ſhort Touch. It will not be needful for us to derive the Seminary of this from the Air infected with ſome Miaſm, but rather to fetch the ante-

cedent Cause of it from the undue Constitution of the Year, and the Indisposition of our Blood acquir'd thereby; for Spring and Fall intermittent Fevers yearly reign, to wit, because our Blood, as the Juyce of Vegetables, is wont to be moved, and to display it self at these times more sprightly than ordinary: wherefore, if the Mass of Blood, by reason of the foregoing Season of the Winter or Summer be altered from its due Temper, and has contracted a sharp or atrabilarious Diathesis of another kind; its Dyscrasies, began before, are chiefly maturated about the Equinoxes; to wit, when the Blood, more freely fermenting (in case it falls from its natural Crasis) does not so readily sanguifie, but will be apt to pervert the nutritive Juyce, mix'd with it, into an extraneous and febrile Matter. Since therefore this Year very much declined from its due Constitution (that not only the preceding Dog days, but the two Solstices and Equinoxes before were altogether intemperate) its no Wonder if intermittent Fevers, more frequent than usual, and those attended with some unusual Symptoms, reign in Autumn. That therefore an Epidemick intermittent Fever reigns at this Time, I think it ought not to be attributed to the Fault of the present Air, but to the Irregularities of the foregoing Season: but on what Causes and Occasions certain peculiar Symptoms, and distinct from the common Rule of Intermittents, arise in this Fever, it is worthy to be inquired into. I have said above, that the Apparatus whereby this Fever became destructive to Mankind, consisted chiefly in *two things*; to wit, the Temper of the Year one while mighty cold, afterward happening to be very hot, both variously perverted the Crasis of our Blood, and affected the Pores of the Skin with an undue Constitution. According to the Reasons taken from both, I shall briefly explicate the Accidents of this Disease, and assign the Causes of its Phœnomina.

1. First, we observe that the Type of this Fever was various; to wit, in some with a continual Effervescence, in others with an Eruption of Spots, but in most intermitting, and like a *Tertian*, and sometimes (tho rarely) like a *Quotidian*, renewing its Fits either each or every other day: we assign the Cause of this Diversity, because in this Year the morbid Procatarxis was greater and stronger, than only to produce an intermittent Fever generally usual in *Autumn*: wherefore in some (haply of a more deprav'd Habit of Body) it raised Fevers somewhat malignant; and in those to whom it brought Intermittents according to the wonted Custom of the Season, it distinguished them by some peculiar Appearance of Symptoms.

2. Persons after being seis'd with the Epidemick Fever at this time (whether it be continual or intermittent) forthwith undergo ill Affects of the Head; to wit, they are wont to be infested sometimes with a violent Head-ach, sometimes with a Stupor, or a too great Distraction of the Animal Spirits; the Reason of this is, that the nervous Juyce, as well as the Blood, through the Distemperature of the Year,

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is very much altered from its due Criſis, to wit, from its ſweet and ſpirituous Nature, and has become ſometimes dull and almoſt vapid, ſometimes too ſharp and pungitive. Moreover, the Maſs of Blood alſo has greatly contributed to this Evil; for whilſt it ferments the vapory Effluvia, which ought to be blown away outwardly, by reaſon of the Pores being conſtring'd, are ſent to the Membranes of the Head and the Brain: and by reaſon of this cloſing of the Pores communicated almoſt to all, a Sweat happens with Difficulty, and that but partial, and often interrupted in the Fits. Hence alſo in the height of the Diſeaſe, a perfect Criſis, or a ſpontaneous Solution of it, ſeldom, or ſcarce at all, happens: but inſtead of it, if the thing be committed to Nature, an aduſt Matter, or Recrements heap'd together in the Blood, are conveyed to the Brain, and there raiſe Affects ſometimes of the Coma, ſometimes of the Frenzy, and thoſe laſting and obſtinate.

3. That the Fits ſometimes begin without a Cold, or a Shivering, and are protracted in length with a troubleſome Heat, and a difficult, partial, and often-interrupted Sweating; afterward, that the ſame being ended, the Diſeaſed grow hot again, ſo that the Acceſſes are not ended but after a long Evaporation of a dry Breath, the Cauſe is the too ſharp and bilous Diſpoſition of the Blood, whereby, being fill'd with a burnt Salt and Sulphur, rather than with a Serous Latex, when it grows turgid, it preſently takes to a light Flame, without a previous flowing of the nitrous Matter: and therefore by reaſon of its want of Serum, and the Pores being ſhut, its Deflagration is continued a long time, in a manner only with a dry Exhalation, and ſcarce ends at length in an Apyrexia: and therefore the Intervals of the Fits are very troubleſome with a Heat and Drought, a Head-ach, a Vertigo, and other Affects; to wit, becauſe the febrile Matter heap'd together in the Blood, is not wholly diſcuſſed every Fit, but part of it being left after the Acceſs, as extraneous and not miſcible, brings almoſt a continual Effervеſcence.

4. It is to be obſerv'd, that thoſe that are affected with this Fever preſently fall from their Strength, and the wonted firm State of their Bodies, that after a Fit or two, being out of Breath and very weak, they are ſcarce able to ſtand or walk without a Staff; whereas it is uſual for ſuch as are ſeiſed with a common intermittent Fever, to be ſprightly and chearful enough during the Intervals of the Acceſſes: The Reaſon of the Difference is; becauſe, in this Fever, both the Maſs of Blood is more depraved with the impure Mixture of a degenerate Juice, and eſpecially becauſe the ſame is more perverted from its natural Craſis, and therefore when out of the Fits it does not boyl, yet it does not ferment duely and evenly in the Sinus's of the Heart: wherefore, when by a quick Motion, or any Agitation of the Body, the Blood is vehemently preſſed forward into the Sinus's of the Heart, becauſe it is not all preſently kindled there, and ſprings forth, by its Stagnation, it brings an oppreſſion of the Heart, and great Faintings of the animal Spirits.

By reaſon of this kind of Dyſcraſie of the Blood, to wit, whereby it is unfit for Fermentation, or a due Accenſion in the Heart, ſome Cattel alſo, and eſpecially Horſes, in the Spring or Fall, become ſhort-winded, and very unfit for a ſwift Motion.

5. It remains for us to enquire, laſtly, concerning this Fever, wherefore it reigns chiefly in Pariſhes, little Villages, and in the Country, when Cities and great Towns have little of it. It might ſeem that this Affect might be raiſed from marſhy and other noxious Vapours, plentifully heap'd together in this or that Tract of the Air; but it is more rational to ſay, That the Inhabitants of thoſe Kinds of Places having been more expoſed to the Winter Colds and Summer Heats, contracted a greater Dyſcraſie of the Blood, and ſo a more apt Diſpoſition to this Fever: for thoſe that live in the Country ſcarce go out of their Houſes, but are expoſed to the Rays of the Sun, or to the Fervour of the heated Air. Moreover, Husband-men, and thoſe in the Country, being uſed to hard Labours (among whom this Fever chiefly reign'd) through their Toyls and immoderate Exerciſes in the Fields, and withall uſing an ill and courſe Dyet, ſooner acquire an aduſt and burnt Diſpoſition of the Blood, and therefore more apt to this Diſeaſe, than Citizens and Townſ-men, who enjoying Reſt and a wholſome Dyet, moſt commonly live in Houſes together, or in Streets cooled by the ſhadow of Houſes. The truth of this Aſſertion is confirm'd, for that not only the Epidemick Fever now reigning, but the other alſo of the *Autumn* before, rais'd through a Dyſcraſie of the Blood, was chiefly riſe among Husbandmen and the Inhabitants of the Country; but that popular Fever which aroſe in the middle of the Spring, depending chiefly on a letted Tranſpiration, infeſted moſt Citizens and Towns-people: mean while, thoſe in the Country uſually procuring a more free Tranſpiration by Exerciſe and Labours, liv'd more free from it.

The general Prognoſtick of this Diſeaſe only ſeems to threaten, that in a manner the like ill conſequence will attend it, as followed the Epidemick Fever of the foregoing Year; to wit, (by a Gueſs taken from the Diſtemperature of the Blood, rather than from the Taint of the Air) we may dread an imminent *Quartan* Fever again, but not a Plague. As to the particular Obſervations in it, to give you in ſhort the Signs which promiſe Death or Well-doing; they chiefly regard the Temperature and Governance either of the Blood with the vital Spirit, or alſo of the nervous Juice with the Animal Spirit. If from the Pulſe, Urine, Actions not injur'd, and the Appearance of other Symptoms, it be plainly indicated, that the Blood, as to its feveriſh Diſpoſition, be not greatly perverted from its natural Craſis, that in the Fits it burns only moderately, and that in every Conflict it eaſily ſubdues the load of the febrile Matter, and wholly ſhakes it off from its Fellowſhip, that after ſome Acceſſes the Maſs of the ſame Blood is ſomewhat reſtor'd toward its due Temper, that it leſs perverts the nutritive Juyce, and ſends forth that which is extraneous and not miſcible, with a more mild Tur-

Turgeſcency; and in the mean while, if the other ſpirituous Liquor duely influences and irrigates the Brain and nervous Bodies, that Sleep, Watchings, Senſation and Motion are perform'd well, or at leaſtwiſe indifferently, we may hope all good things of the Diſeaſed. But if it ſhall appear from the ſame kinds of Signs, that the Blood in this Fever has gotten a Craſis far remote from the natural, if it perverts much of the nutritive Juyce, and afterward from its extraneous and incongruous mixture the Liquor of the Blood be greatly troubled, and the Spirits are driven into Confuſion; if in the Fits the Blood burns too intenſly, and for a long time, and does not duely ſubdue the febrile Matter, or ſend it wholly forth, but its impure Mixture is ſtill more infected, (and in every feveriſh Acceſs more and more) and withall, the Spirits being continually conſum'd, is become poor, we may declare the Life of the Diſeaſed to be in a dangerous Condition. If, beſides theſe, the nervous Juyce be faulty, that being altered from its due Temper, or being dull, and vapid as it were, it does not actuate the Brain and *Genus Nervoſum*, or being more ſharp than it ought, it continually irritates the ſame into Cramps and Diſtractions; and if beſides vapory Effluvia continually departing from the Blood, or aduſt Recrements, wont to be voided forth by a critical Sweat, are convey'd to the Head, and there cauſe Lethargical or Maniacal Affects, the well-doing of the Diſeas'd ſtands very tickliſh, and we may fear a very fatal Event.

Concerning *the method of Cure* of this Diſeaſe, three chief curative Intents come under Conſideration: Firſt, A ſpeedy Reducement of the Blood and nervous Juyce to their natural Craſis, (as much as may be) or at leaſtwiſe a Prevention of a too great Depravation of them: Secondly, A due Management of the Diſeaſed as to their Fits, which ought to procure; firſt, that leſs of degenerate Juyce be heap'd together for a Matter of the Fit; ſecondly, that the ſtore of that which is heap'd together be wholly blown off every Acceſs, that the Diſeaſed may be better in the Intervals: Thirdly, That the Body being altered for the better, the Fits be ſtopt with antifebrifuge Remedies: the third Intent regards the Symptoms chiefly preſſing, which muſt be ſeaſonably obviated, whereby Nature being not hindred, may reduce whatſoever intemperate is contain'd in the Viſcera, may ſubdue and clear forth what is extraneous, and may ſoon recover its former Strength and Vigour.

Firſt therefore, for the Reducement and Correction of the Blood and nervous Juyce, divers kinds of Evacuations, about the beginning of the Sickneſs, are wont to be us'd in this Diſeaſe with good Succeſs. It is manifeſt by modern Practiſe, that Vomitories are very much more uſeful in this Affect, than in a common *Tertian*; wherefore in a robuſt Body, and prone to Vomit, about the beginning of the ſecond or third Fit an Emetick Medicine is wont to be given. The Operation of this ſeems to do more good in this Fever, both in as much as it plentifully eva-

evacuates the filth from the Ventricle, and the yellow Choler from the *Vaſa Choledocha*, and becauſe it copiouſly expreſſes the Serous Latex from the Emunctories of the *Genus Nervoſum*, plac'd about the Pancras and Inteſtines, and draws it forth by ſtirring them: wherefore we obſerve, after a Vomit given, the Diſeaſed are better as to the Affects of the Head. Let Purging (where Vomiting is not proper) be ordered the day following the Fit, as a *Succedaneum* to the other: alſo tho a Vomit be premitted, it may do well after a Fit or two; but let it be perform'd only with a mild and gentle Medicine, which does not trouble or exagitate the Blood. It is uſual with us in theſe Fevers, all Aloetick or diagridiated Medicines laid aſide, to give only the Infuſion or Powder of Sena, Rhubarb, and yellow Saunders, with Tartar and Salt of Wormwood: and to uſe this kind of Purging a little after the beginning the Diſeaſe; but at other times, to make the Belly ſoluble by a frequent uſe of Clyſters. That Blooding in this Diſeaſe is very good, frequent Experience has ſufficiently taught us; for ſince, by reaſon of the Pores being more clos'd than uſual in all, the Blood boyling in a Fever wants a Ventilation, letting Blood ſupplies the Place of a more free Tranſpiration, and prevents the Effluvia reſtrained from being ſo readily diſcharged on the Brain and *Genus Nervoſum*. But this Remedy is chiefly indicated by a very hot Blood and a hot Temperament; nor ought it to be uſed indifferently by old Perſons, ſuch as are flegmatick, and others very weak, unleſs haply it be in a ſmall Quantity, that the Maſs of Blood may be ſomewhat eventilated, and that the Tranſlation of the febrile Matter into the Brain may be ſtopped. If it be proper to open a Vein, let it be done about the beginning of the Fever, or at leaſtwiſe before the fourth or fifth Acceſs; to wit, before the Blood be rendred very effæte by a frequent Deflagration, and too impure by the Mixture of an aduſt Matter: for if Blooding be uſed when the Blood is mightily vitiated, the vital Spirits, and the Strength of the Diſeaſed are thereby more debillitated; nor is there any thing withdrawn from the Power of the Diſeaſe, or its Cauſe. There remains another Evacuation famous in this Fever; to wit, by Bliſtering Plaiſters applyed to many Parts of the Body: theſe are ſo vulgarly obſerved to give Relief, that ſuch as are againſt them, and have a great Averſion for ſuch a Remedy, being led by the Example of others growing better thereby, eaſily admit of it. After what manner they ſeparate the ſkarſe Skin from the Skin, and raiſe it as it were into a Bladder full of Water; whether they fetch the watery and limpid Humour from the Arteries, or out of the Nerves, this is not the Place to enquire: but, that they are uſed with benefit in this Diſeaſe, beſides Experience, this Reaſon ſeems ſomewhat to convince; to wit, becauſe a large Diſcharge of this kind of ſerous Humour does in ſome ſort recompence the Defect of a free Tranſpiration. Moreover, this kind of Remedy opens as it were the Doors and Gates at which the Blood and nervous Juice may preſently void forth the extraneous Matter mixt with them by a nearer way

way of Purging; wherefore in the Plague and malignant Affects, Veſicatories are eſteemed very profitable. Alſo it is manifeſt by common Obſervation, that in this and other Fevers, hapning in the ſame Seaſon, they prevent the ſevere Affects of the Head, and are wont to relieve them being caus'd before wherefore in Men that are flegmatick, aged, and of a cold Temperament, Epiſpaſtick Plaiſters may be apply'd about the firſt Invaſion of this Diſeaſe for Preſervation; and in any others, troubled with a Drowſineſs, a Vertigo, or a violent Head-ach, they are wont to be advantagiouſly uſed for the Cure of thoſe Affects. But in very hot Conſtitutions, where with a Defect of Serum, the Blood is too much burnt; and if thoſe that are in Fevers with an intollerable Burning are obnoxious to Watchings or a Frenzy, Veſicatories do not ſeem fit to be uſed.

For correcting the Craſis of the Blood, and the Tone of the Viſcera, qualifying and digeſtive Remedies have place, in intermediate times, when the Sick have reſted a little from the Evacuations ev'n now mention'd, being ſuch as fuſe the Liquor of the Blood, and ſeparate its Fœculencies, and drive them towards the Emunctories as it were by precipitating them; for thoſe kinds of Intents are wont to be giv'n cooling *Juleps and Decoctions, acidulated with Spirit of Vitriol, of Salt, with Tamarinds, the Juyce of Oranges, or of Limons*, whereof neat Forms enough are vulgarly to be found: and for this end conduce *acetous, ſaline, and teſtaceous Powders*, viz. *ſuch as are prepared of Tartar, Sulphur, the fixt Salts of Herbs, of burnt Harts-horn, alſo of the Claws or Eyes of Crabs.* For Example, *Take Cream of Tartar three drams, Salt of Wormwood a dram and half: the Doſe is half a dram in an aperient Decoction, twice a day, out of the Fit.* Or, *Take Cream of Tartar two drams, Powder of Crabs-eyes a dram, Nitre purified half a dram, mix them, let it be giv'n after the ſame manner.* Or, *Take burnt Harts-horn two drams, Spirit of Vitriol as much as the Powder will receive by imbibing: the doſe is a Scruple.* It is of excellent uſe when thoſe that are in the Fever are troubled with Worms. Theſe kinds of Remedies promote the Secretion of the febrile Matter, and reſtore the almoſt loſt Ferments of the Blood and Viſcera.

The ſecond Intent, to wit, the due Management of the Diſeas'd in the Fits, comprehends many things: firſt, a neat Form of Dyet ought to be ordered, that a large heaping together of the degenerate Juyce for a Matter for the Fit may be hindred: wherefore, let the Diſeaſed feed only on a thin Food; let them wholly abſtain from Fleſh, or Broth made of it, from Eggs, generous Wine, and all rich Fare; being content only with Barley or Oat Broths, Panada, Whey, and ſmall Ale: in regard a more plentiful Dyet is not concocted, or aſſimilated, but it oppreſſes the Stomach, and being mixt with the Blood it troubles its Liquour, and forces it to boyl vehemently, as the Fit comes on, and during the while it laſts, unleſs it be for quenching Thirſt, let no Food be taken: but for qualifying the Heat and Drought, cooling Ju-

leps

leps and Decoctions, and especially small Ale and Whey, ought to be allowed. Secondly, a little before the feverish Access is expected, let a gentle Medicine be given, which either may keep off the Fit by preventing it, or may render it easie by procuring an easie Sweat. For this Use, the febrifuge Potion of the Learned *Riverius* does well, made of *Carduus Water, with Oyl of Sulphur and Salt of Wormwood:* Or, *take Cream of Tartar, Salt of Wormwood, Nettle Seeds, of each a Scruple: let it be given in a Decoction of the Roots of Sorrel.* When the Fever begins to decline, and the Fits are a little more remiss, Febrifuge Epithemes outwardly apply'd often stop the febrile Accesses; tho in the mean while, as long as the Fits return, let the Diseased be so managed, that every Access, the feverish Matter heap'd together in the Blood may be wholly blown off: wherefore, when a Sweat happens with difficulty, let it be a little raised with temperate Medicines; also let the Diseas'd be kept in Bed with a gentle Sweat for many hours, nor let them be permitted to rise too soon: for I have often observ'd, that the Diseased have still grown worse, because being impatient of lying in Bed, they put on their Cloaths before the watery Effluvia were exhal'd enough.

Thirdly, as to the Symptoms, and particular Accidents, with which the Diseased are wont to be troubled in this Fever, a great many of them are sufficiently provided against with the Remedies and Method of Cure hitherto deliver'd; against the Thirst, Burning, the Roughness of the Mouth and Tongue, Vomitings, the Looseness, a Swooning, or danger of Fainting, the Prescripts commonly used in other Fevers may aptly enough be transferr'd hither. But the Things which in this Disease seem to require a peculiar Method of Healing, are chiefly the Affects of the Head and Brain, with the *Genus Nervosum*; by which, unless seasonably obviated, the Diseased are soon brought into a great danger of Life: Concerning these kinds of Evils of the Head, the Indications are of two kinds. If it appears by a Drowsiness, a Sleepiness, a Vertigo, or a Head-ach, that the nervous Juyce is too dull, and as it were vapid, and therefore that it does not vigorously enough actuate the Brain and nervous Bodies, besides the Remedies above deliver'd, and especially the Vesicatories, Medicines full of a volatile Salt, excellently conduce in this Case; wherefore Spirit of Harts-horn, of Blood, also the Salts of the same are of excellent Use: but, if the nervous Liquor be too sharp, or the Effluvia, sent from the boyling Blood, drive the Animal Spirits into Distractions, those kinds of Remedies of volatile Salt are given with benefit in somewhat a less quantity. Moreover, a frequent Letting Blood, and Medicines allaying its fervour, do good, as Emulsions, Whey, pure Water plentifully drank: let Opiates be used in this Fever with great Caution; for the Frenzy appeas'd by them is oftentimes chang'd into a Lethargy, or a deep Stupor.

FINIS.

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